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Executive, Editorial & Advertising Offices: Chestnut & 56th Sts., Philadelphia 39, Pa. GRanite 4-5600

Acceptance under Section 34.64 P.L.&R. authorized.

Published monthly. Subscription rates: U. S. $5 per year; Canada, $5.50 per year; Foreign Countries, $6 per year. Single Copies 50¢ each, except February Directory Number—$4 per copy.

DISTRIBUTION AGE

ESTABLISHED 1901

Vol. 54, No. 4 April, 1955

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MOVING?

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On the Line—

The Final Call

THIS is a crucial month for people engaged in traffic and transportation. April 30, 1955, is the last day that the Interstate Commerce Commission will accept applications for examinations for Class B, non-lawyer practitioners under the old rules.

The new rules, outlined in the Commission's *Qualification Standard*—originally issued Dec. 1, 1954, and amended Feb. 1, 1955, in compliance with a plea by Associated Traffic Clubs of America—become effective May 1, 1955.

Specifically, the new standard requires two years of college education, or its equivalent, plus some practical experience. Heretofore, eligibility was based on somewhat informal conditions, bearing heavily on practical knowledge with a reasonable education.

To many, the new requirements simply are indicative of the changing times. To that we say, yes and no. The negative is based on knowledge that the American Bar Association has been exerting great pressure to raise the standard or, and preferably, eliminate the Class B rating.

The transportation industry has not, and is not, receiving its share of college-trained men, compared with other businesses and professions. Most college-trained people matriculated with the desire to enter the older professions.

As a matter of fact, the total number of college students, even in this enlightened age, is quite small. The Department of Commerce's 1950 census shows that only about 5.5 per cent of men and women 25 years of age and over had from one to three years of college education; about 4.5 per cent graduated.

Can this mean that even some lawyers are not college graduates? The answer, simply, is YES.

Be that as it may, we think the Commission has done a fine job of rationalizing the problem in favor of ambitious traffic and transportation personnel now preparing for the ICC examination; not to be overlooked, also, are advantages that will accrue to firms employing these people.

It remains, now, for all who can qualify to file an application not later than April 30, 1955. The examination may be taken at any time up to February, 1957.

This opportunity has been calling for many years. This is the final call; the conditions never will be easier. There is much to gain, nothing to lose.

Yakkety Yak

He who needs a push toward accomplishment will get pushed — aside.

SHORT STORY: An employee asked his boss for a salary increase.

"Okay, Ed," came the reply. "This is the form I must use to present your request to Mr. Brown. We must answer these questions.

. . . "Has employee successfully assumed new or additional duties?

. . . "Has he devised new or better methods of doing his job?

. . . "Has he taken any training courses lately?

. . . "What other reasons do you offer for recommending increase?"

The employee was surprised. He wasn't prepared to put solid reasons down in black and white.

In short, he fell short.

SKILL? Maybe our educational level has risen. Internal Revenue Commissioner Andrews says errors in arithmetic on 1954 federal income tax returns dropped 15 per cent.

. . . Or maybe years of practice made us more skillful.

BOO! Speaking of tax returns, some sponsors of Ohio's axle-mile tax law are convinced it's a boo-boo.

. . . It has failed, by 50 per cent, to produce anticipated revenue.

. . . They favor its repeal and, in lieu, are considering possibilities of an additional two-cent gas tax on heavy trucks.

H. C. Greene

Editor

End BAG-SNAG!

TOUGH, RIGID and LIGHT-WEIGHT

Poke-Pak is smooth, the ultimate in unitized load handling, free from nails and splinters that tear bags and spill contents. Free from maintenance, too, because it costs so little it's expendable. You can forget returns, freight, credits and charge-backs. And you store 60 to 70 in the space of one wood pallet.

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Circle No. 6 on Card, Facing Page 53, for more information

LETTERS
TO THE EDITOR

Statute of Limitation

To The Editor:

Since we have a three-year statute of limitations in this state, we wonder, if we do not exercise our right to sell within this period household goods or other property on which charges have not been paid, if this statute would apply.

In the past we have sold many lots of furniture that have been in storage longer than three years, and we have been wondering recently if our lien is forfeited on that portion of the charges that would be over three years old.

L. C. BATTS
Raleigh Bonded Warehouse, Inc.
Raleigh, N. C.

If the Statute reads so as to include goods in storage it is applicable and would under certain circumstances "outlaw" storage debts that have been owed longer than three years. However, interpretation of such a law or statute is difficult and uncertain. In fact the higher court may even reverse a lower court's interpretation of such a law because the formulation is important and sometimes a comma may change its meaning and practical application. Also, your procedure in handling storage accounts may have an important bearing on the outcome of such a suit. A majority of higher courts, for instance, hold that a Statute of Limitation is rendered inapplicable if the debtor makes a single payment on the debt or account. —Leo T. Parker, DA Consultant.

Freight Equalization

To The Editor:

We are trying to dig up some background for, and some precise information about, the current status of any law or laws which may govern the practice of "basing point" selling or "freight equalization." If you have ready at hand a brief picture of the present restrictions against this practice, we would appreciate your advice on it. Or, if that is impossible, could you cite us the law or laws which govern, so that we can do some research on this ourselves.

H. A. CARR,
Traffic Manager
Thayer, Inc.
Gardner, Mass.

You may rest assured that, when reviewing new higher court decisions from the Advance Sheets, I shall make special effort to locate a new higher court decision which exactly answers your question, at which time I shall write you again and publish the cause and outcome of the case.—Leo T. Parker, DA Legal Consultant.

Chuting the NEWS

Coming Events

Apr. 11-12—Associated Warehouses, Inc., 21st Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.

Apr. 12—Affiliated Warehouse Cos., 2nd Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.

Apr. 12—Allied Distribution, Inc., 22nd Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.

Apr. 12—American Chain of Warehouses, Inc., 44th Annual Meeting, Edgewater Beach Hotel, Chicago.

Apr. 12—Distribution Service, Inc., Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.

Apr. 12—Interlake Terminals, Inc., Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.

Apr. 12-13 — Middlewest Shipper-Motor Carrier Conference, regular meeting, Blackhawk Hotel, Davenport, Iowa.

Apr. 12-16—American Warehousemen's Assn., Annual Meeting, Edgewater Beach Hotel, Chicago, Ill.

Apr. 16—Indiana Household Movers & Warehousemen's Assn., Indianapolis, Ind.

Apr. 18-25—American Management Association, Packaging Exposition, Navy Pier, Chicago, Ill.

Apr. 19-21—Caster & Floor Truck Mfg. Assn., La Salle Hotel, Chicago, Ill.

Apr. 21—Minnesota-Northwest Warehousemen's Assn., Nicollet Hotel, Minneapolis, Minn.

Apr. 28-30—California Moving & Storage Assn., El Mirador Hotel. Palm Springs, Calif.

May 4-6—General Claims Div., AAR, Washington, D. C.

May 5-6—Northeastern Motor Carrier Claim Conference, spring meeting, Philadelphia, Pa.

May 5-6—Association of Interstate Commerce Commission Practitioners annual convention, New York.

May 5-8—Local Cartage National Conference, annual meeting, Hotel Cleveland, Cleveland, Ohio.

May 9-12—Foreign Trade Transportation Institute, annual meeting, San Francisco, Calif.

May 10-12—Freight Claim Div., AAR, Denver, Colo.

May 14-15—Delta Nu Alpha Transportation Fraternity, annual meeting, Boston, Mass.

May 14-18—Foreign Trade Exposition, Shrine Exposition Hall, Los Angeles, Calif.

May 16-20—6th National Materials Handling Exposition, International Amphitheater, Chicago, Ill.

Trucking Industry's Claim Payment Ratio Dropped to 1.05% During First Half of 1954

A drop of .12 per cent in the ratio of net claim payments on gross revenue for the first half of 1954 has been reported by the National Freight Claim Council, American Trucking Associations, Inc.

The 1954 ratio for 105 reporting motor freight carriers fell to 1.05 per cent, compared to 1.17 per cent in 1953, and 1.18 per cent in 1952.

According to John M. Miller, executive secretary of the Council, "The sizeable reduction reflects results from improved claim prevention, which more and more carriers are realizing is an essential of good business operation."

Miller said, "There is some indication, however, that a part of the decline is due to an increase in revenue during the second quarter of 1954, which, because of the time lag in claim filing, was not immediately reflected in claim payments."

He also called attention to the encouraging discovery that the percentage of claims settled within 30 days continues to increase.

—DA—

The Raritan (N. J.) Traffic Club has established a $515 scholarship for a 2½-year evening course in traffic management at the Academy of Advanced Traffic.

—DA—

The Shippers' Conference of Greater New York last month elected as chairman Nicholas Fucci, general traffic manager, John Sexton & Co. Edward J. Longden, traffic manager, George W. Helme Co., was named first vice chairman.

—DA—

Illinois Central RR Man Heads Development Assn.

P. R. Farlow, general agricultural and forestry agent of the Illinois Central Railroad, was elected president of the American Railway Development Assn., at that group's annual meeting in White Sulphur Springs, W. Va., last month.

Other officers elected were: D. M. Lynn, Erie Railroad, first vice president; E. E. Exon, New York Central System, second vice president; F. E. Wolff, Canadian Pacific Railroad, secretary-treasurer.

Some 140 attended the meeting. Memphis, Tenn., was selected as the site for the golden anniversary meeting in April of next year.

Meet with Hoover Group

At the request of the Hoover Commission Task Force on Paperwork, a committee of the ATA's National Accounting and Finance Council met with Government agencies March 30 to discuss the trucking industry's recommendations for a $3,000-000-a-year reduction of paperwork.

The ATA Council's Federal and State Reporting Committee met with representatives of the ICC, the General Accounting Office and the Treasury Department. A representative of the Hoover Task Force presided.

(*Please Turn Page*)

Chuting the News . . .

(Continued from Preceding Page)

NFWA Names Aspinwall President; Fates, Wright, Friedel and Healey Named As Vice Presidents

J. C. Aspinwall, Jr., of Security Storage & Van Co., Norfolk, Va., was elected president of the National Furniture Warehousemen's Assn. at the annual NFWA convention in Florida last month.

Four new vice presidents and regional directors named include: J. W. C. Wright, Globe Storage Co., Baton Rouge, La., Southern Div.; Harold L. Fates, Manhattan Storage & Warehouse Co., New York, N. Y., Eastern Div.; A. A. Friedel, Lincoln Storage Co., Inc., Cleveland, Ohio, Central Div.; George W. Healey, Fidelity Van & Storage Co., Los Angeles, Calif., Western Div.

Joseph A. Hollander, of Hollander Storage & Moving Co., Inc., Chicago, was re-elected secretary, while George A. Julin, of Werner Bros.-Kennelly Co., Inc., Chicago, was re-elected treasurer.

Four new directors for three years were appointed. These include: Lee J. Sloan, Sloan's Moving & Storage Co., St. Louis, Mo.; K. W. Callahan, John E. Withers Transfer & Storage Co., Miami, Fla.; Harvey E. Lounsbury, Jr., Lyon Van & Storage Co., Spokane, Wash.; and Edwin A. Parrish, Hampden Transfer and Storage Co,. Baltimore, Md.

Walter J. Holleque of Eugene Transfer & Storage Co., Portland, Ore., was named director to serve the unexpired term of V. A. Carroll. Robert G. Greeley of New England Storage Warehouse Co., Boston, Mass., was elected director for one year, replacing Fates. Director for one year, succeeding Friedel, is C. F. Hendricks, Kansas Van & Storage Co., Inc., Topeka, Kansas. George Winkler was named director-at-large.

—DA—

Canadian Traffic League Sets Attendance Records

Attendance at the 39th annual meeting of the Canadian Industrial Traffic League broke all previous records. Some 232 league members convened in Toronto, Ontario, Feb. 15-16, to review the work of the organization and elect new officers.

President of the league for 1955 is John Mitchell, traffic manager, DuPont Co. of Canada Ltd. Other officers are: A. F. Downey, Glidden Co. Ltd., first vice-president; H. J. Ringrose, Hiram Walker & Sons, Ltd., second vice-president; F. H. Gore, Seiberling Rubber Co. of Canada Ltd., treasurer.

Howard A. Mann continues as general secretary at the league's offices in Toronto. During the course of the two-day meeting, the 23 committees and five divisions of the league submitted reports reviewing their work.

—DA—

R. Chester Reed has been named general exposition chairman of the 10th Anniversary National Meeting of SIPMHE, in New York, Sept. 19-22.

—DA—

Handling Show Theme Is Concept of Obsolescence

"The Concept of Obsolescence" will be the theme of the 6th National Materials Handling Exposition, May 16-20, in Chicago's International Amphitheatre. The show will demonstrate all types of handling equipment under simulated industrial conditions.

New handling systems to keep pace with the growth of automation will highlight a 3-day conference scheduled concurrently with the show. The conference, which will run from May 16 to 18, is being sponsored by the AMHS.

Traffic Award

James M. Davison (left), who recently retired from the American Pulley Co., where he had served as traffic manager, accepted the C&FTMA award for leadership and distinguished service to his industry through his activities in the field of traffic management. James Hanson (right), vice president, Fairbanks Co., made the award plaque presentation

News Briefs

At a recent Inland Waterway Luncheon sponsored by the **Houston Traffic Club**, traffic managers were told that railroad paralleling navigable waterways enjoy a considerable traffic advantage over other roads.

ICC Dockets 28300 and 28310 were the subject of a panel discussion at a joint meeting of the **New York** and **Newark** chapters of **Delta Nu Alpha** last month.

The **Baltimore and Ohio Railroad** on March 15 extended its piggy-back service, with service between Washington, D. C., on one hand, and Pittsburgh, Chicago, Indianapolis, Cincinnati and St. Louis on the other; also between Indianapolis on one hand, and Washington, Baltimore, and Philadelphia on the other.

A decrease of nearly $600,000 in pay-outs on freight loss and damage claims in 1954 as compared to 1953 has been reported by the **Union Pacific Railroad.**

Postmaster General Arthur E. Summerfield spoke at the recent 45th Annual Meeting of the **Traffic Club of New York.**

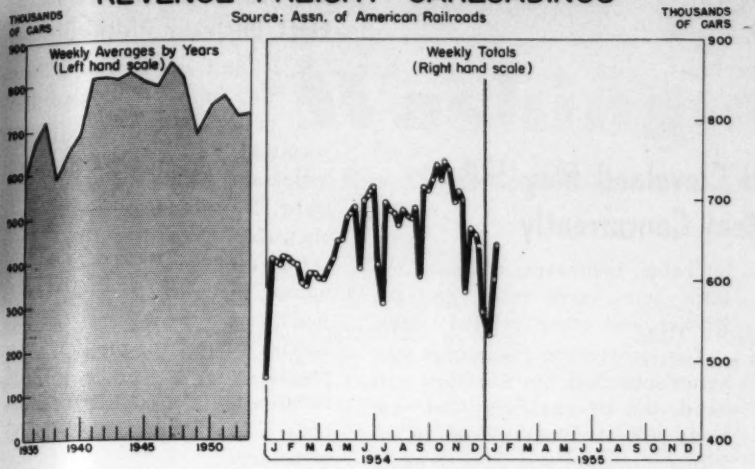
A new look at government control of transportation was urged by the AAR's assistant general solicitor at a recent meeting of the **Waterbury (Conn.) Traffic Club.**

Western Express Co., Cleveland, Ohio, recently completed over a million miles without accident of any type. The perfect performance involved 150 drivers covering 1,064,752 miles in a 6½-week operation.

Clarence A. Kelley, general manager of Dixie-Ohio Express Co., has been eleeted president of the **Ohio Trucking Assn.**

REVENUE FREIGHT CARLOADINGS

Source: Assn. of American Railroads



Loadings of revenue freight during week ended Jan. 15 totaled 644,940. A month ago 641,871; a year ago 619,871.

Traffic Committee Acts on Reorganization In Compliance With Recent ICC Decision

Reorganization of its organizational structure to comply with a decision of the ICC was the major action of the National Traffic Committee, as the 100-member trucking industry group met in Washington, Feb. 23-24.

Amendments were recommended to eliminate from the National Motor Freight Traffic Agreement all provisions, rules and procedures relating to participation in the initiation, consideration and change of freight classification ratings, rules and regulations. The amended agreement will be sent to the 5,300 participating carriers for their signatures.

Approval also was given for a new and separate Section 5(a) Agreement which will be submitted for signature of carriers participating in the National Motor Freight Classification.

Section 5(a) of the Interstate Commerce Act provides for ICC approval of collective rate-making agreements. Commission approval carries with it immunity from the anti-trust laws provided the agreement is adhered to strictly.

A "dummy" tariff, containing a set of model rules covering the general rules and regulations usually found in motor carrier tariffs, will be sent to the National Industrial Traffic League, it was decided, for critical review.

—DA—

Handling and Warehousing

How to coordinate materials handling and other related activities with warehousing and traffic was a principal topic of discussion at the spring manufacturing conference of the American Management Assn., in Chicago, last month.

Some 800 executives in these fields attended the session. One entire afternoon was given to a round table discussion of ways to improve warehousing and distribution.

—DA—

Door-to-Door Air Freight

Slick Airways expects to inaugurate transcontinental door-to-door air cargo service on a scheduled basis within the next few weeks. The new service will be effected through use of a Truck-Air-Truck system whereby cargo will be picked up from the consignor by truck, delivered to the nearest Slick terminal and loaded on a scheduled flight. The service will be available in all 20 cities currently served by Slick.

Legislative Line-Up

Following is a brief summary of legislative items pending in Washington. The status reported is as of March 10.

FOREIGN TRADE—H.R. 1, the Administration reciprocal trade bill, has been passed by the House. Senate Finance committee hearings on it in progress.

HIGHWAY CONSTRUCTION—Senate Public Works subcommittee hearings on the Gore bill, S. 1048, and the Administration bill, S. 1160. Witnesses are scheduled through late March. House Public Works committee will begin its hearings on the Buckley and Dondero bills, H.R. 4260 and 4261, late this month.

HIGHWAY LAWS—Identical bills (H.R. 234, 235, and 2127) calling for codification of highway laws are before House Public Works subcommittee.

PHANTOM FREIGHT — Hinshaw bills to eliminate excessive charges for shipments of general manufactured goods (H.R. 765) and automotive products (H.R. 528) are in House Commerce committee, with no hearings scheduled.

POSTAL RATES — Administration bill to increase postal rates, H.R. 2988, in House Post Office committee. No hearings scheduled at this time.

TAXES—H.R. 4259, covering extension of present excise and corporate tax rates, has been passed by the House. It is expected to reach the Senate floor late this week or by Monday, Mar. 18.

TERMINAL MARKETS — Cooley bill, H.R. 4054, to set up modern wholesale markets in cities, is in House Agriculture committee. No hearings scheduled at this time.

SHIP MORTGAGES—No hearings scheduled by House Merchant Marine committee on H.R. 1771, to facilitate marine mortgage transactions.

—DA—

Waterways Operators Elect

Vincent A. Kogge, Chicago, manager of the water transportation division of the Marquette Cement Mfg. Co., was elected chairman of the board of The American Waterways Operators, Inc., at the recent annual meeting in Washington. Chester C. Thompson, Washington, was re-elected president. John H. Eisenhart, Jr., Washington, was re-elected secretary-treasurer.

(*Please Turn Page*)

Chuting the News . . .

(Continued from Preceding Page)

LCNC Annual Convention in Cleveland May 5-8; Local and Heavy Haulers Meet Concurrently

Local cartage truck operators and heavy and specialized haulers of the Local Cartage National Conference will conduct their Annual Convention at the Hotel Cleveland, in Cleveland, Ohio, May 5 to 8.

Topics scheduled for discussion include the distribution tariff case, area-wide labor cartage contracts, piggy-back, taxes, quantity lot rates, insurance, red-book by-laws, joint tariff rates, and the Dillner and other related cases.

The convention committee has announced that the meetings will be devoid of speeches. All sessions will be conducted on an informal question and answer panel arrangement, giving all in attendance an opportunity to participate.

Lift Truck Manufacturers Elect Dunleavy President

F. J. Dunleavy, of Yale & Towne Mfg. Co., has been elected president of the Association of Lift Truck and Portable Elevator Manufacturers. Other officers named include: Arthur Lewis, Lewis-Shepard Products, Inc., vice president; H. S. Germond, III, Revolvator Co., treasurer; R. Kennedy Hansen, Hanson & Shea, Inc., secretary.

Among the association's announced projects is the preparation of an illustrated booklet.

MEN in the NEWS

Materials Handling

John R. Titlow —appointed manager of sales, Lamson Mobilift Corp., Portland, Ore.

Raymond Shile — appointed manager, eastern sales office, Palmer-Shile Co., New York, N. Y.

Roy Dehn—appointed director of engineering. The Cleveland Crane & Engineering Co., Wickliffe, O. Dehn is succeeded by **Alfred W. Schultz.**

Edward R. Harris — named vice-president, Mead Board Sales, Inc., Cincinnati, O.

Packing & Packaging

James E. Roddy —appointed plant manager, corrugated box div., The American Box Co., Cleveland, O.

W. Sheridan Huss, (left)—appointed vp and general sales mgr., and **Edward C. Evans**, (right)—named vice president unit-load dept., Acme Steel Co., Chicago, Ill.

Traffic

Walter R. Stendahl—appointed district traffic manager, Crucible Steel Co., New York. **Daniel G. Donovan** —named district traffic manager, Pittsburgh, Pa.

Jack L. Baker—named traffic manager, Bendix Aviation Corp., Baltimore, Md.

W. L. Elliott—new traffic manager, A. M. Byers Co., Pittsburgh, Pa.

George Trivan—appointed general traffic manager, Gar Wood Industries, Inc., Wayne, Mich. **Walter J. Derkatz**—named traffic manager, Wayne plant.

S. P. Nunley—general traffic manager, Phillips Petroleum Co., Bartlesville, Okla., recently passed away. Mr. Nunley also was a director of the ATC.

Transportation—Air

Aksel Nielsen—elected to the board of directors, United Air Lines, Chicago, Ill.

—Highway

Walker L. Cisler and **Alfred J. Gock** —elected directors, Fruehauf Trailer Co., Detroit, Mich.

P. O. Peterson —recently elected president, Mack Trucks, Inc., New York, N. Y.

Harry L. Norton — new sales manager, Federal Motor Truck Co., Detroit, Mich.

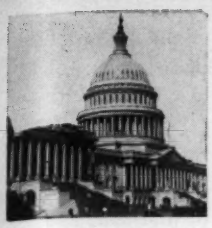
—Rail

David B. Sweeney—appointed coal traffic manager, Illinois Central Railroad, Chicago, Ill.

Lester N. Selig—elected president, The American Railway Car Institute, New York, N. Y., succeeding **Gustav Metzman**, who retired.

—Water

Louis S. Rothschild—named undersecretary for transportation, U. S. Dept. of Commerce, Washington, D. C.



Washington DA

By Ray M. Stroupe, *Chilton Washington News Bureau*

ICC BEGINS INQUIRY—Reports of a proposed railroad management merger in New England are prompting a new ICC inquiry. The agency will try to discover if an effort will be made to combine the management of the New York, New Haven and Hartford with the Boston & Maine. ICC investigation of the rumored merger was asked by the Massachusetts senators, Republican Leverett Saltonstall and Democrat John F. Kennedy.

TRUCK REVENUES RISE—Class I intercity highway carriers boosted their average revenues more than 100 per cent in a recent five-year period. Figures compiled by ATA show averages per carrier climbed from $768,900 in 1947 to $1.6 million in 1952. ATA also reveals that nongovernment truck registrations rose from about 4.5 million in 1944 to nearly 9.5 million in 1954.

RAIL TROUBLES SEEN—Outmoded regulation of U. S. railroads threatens to bring on a serious rate-cutting war among the rail carriers, ICC Chairman Richard F. Mitchell warns. Delays in the agency's consideration of rate increase petitions cost carriers enormous sums, he says. Mitchell would update ICC authority, eliminating Sec. 22 of the Interstate Commerce Act and removing the tax on transportation.

PRODUCT RECORD BRIGHT—Shoved along by a strong fourth quarter, a gross national product for 1954 totaled $357 billion, only 2 per cent below that in 1953. Plant and equipment outlays last year trailed 1953 expenditures by about 5 per cent. Business inventory investment switched from an accumulation of $1.5 billion in 1953 to a liquidation of $3.5 in 1954.

KEEPS REGULATORY POWER—Regulatory authority over the Alleghany Corp. will remain with ICC, that agency has decided. Jurisdiction over Alleghany, which controls the New York Central R.R., has been sought by the Securities and Exchange Commission, for the firm once was registered as an investment company. In 1945, Alleghany was termed a carrier and placed under ICC jurisdiction.

RATE ISSUE UNSOLVED—Oral argument by interested groups is expected to be the next action called for by ICC in the matter of per diem rates for railroad car rental. Examiner Hosmer's proposed order would, if adopted, lower the charge from the present $2.40 to $2.10 per day. Railroads themselves are divided on this issue. Complainants were given until Mar. 15 to present exceptions to the proposed order.

SIGN SEAWAY CONTRACT—Second excavation contract for the St. Lawrence Seaway project is the property of Jack and Jim Maser Corp., Brownstown, Pa. Entering a low bid of $990,900, the firm was awarded the job of building two dike embankments and digging 2.6 million cu yd of earth for the future Robinson Bay Lock, Long Sault Canal, near Massena, N. Y.

RAIL SAFETY CITED—ICC safety statistics reveal 1954 as an excellent year for prevention of accidents to railroad employes and passengers. Employe safety was the best on record, with fatalities per million manhours worked dropping from .11 in 1953 to .08 last year. The passenger fatality rate, .07 per 100 million passenger-miles, was the second lowest in railroad history.

WILL PUSH WATERWAYS—Agenda of the forthcoming convention of the National Rivers and Harbors Congress contains many topics of interest to shippers. Meeting in Washington on May 31 and June 1, the Congress will discuss economic protection of water transportation, obstacles to navigation, channel maintenance deficiencies, and conservation of water resources.

SHELTERS STILL NEEDED—Grain storage in some areas still causes problems, U. S. Agriculture Dept. admits, though commercial-type capacities have grown by 643 million bu since 1951. At latest count, off-farm shelters could hold more than 2.8 billion bu. Private, public, and some flat storage facilities are included in this total, but those owned by Commodity Credit Corp. are omitted.

CAR ORDERS CLIMB—Railroad orders for new freight cars early this year offered long-awaited encouragement to carbuilders. In January, orders numbered 5,087, almost double the 2,685 contracted for in December. Backlog of new orders on Feb. 1 amounted to 18,395, more than 3,000 ahead of the Jan. 1 total.

SEEKS LAND LINKS—Closer transportation ties between the U. S. and Alaska are urged by Sen. Warren G. Magnuson, D., Wash. His bill, S. 985, would give a federal commission the job of studying possible rail and road routes. The commission would be allowed $75,000 for use in this assignment. Its report to Congress would be due within two years.

FACES BROADER TASK—Branching out, as regards the variety of problems to be solved, is Louis S. Rothschild, until recently chairman of the Federal

(*Please Turn to Page* 70)

How P&G times distribution with sales and advertising...

Procter and Gamble ships 20 different product brands to *General Warehouse* in carload quantities for distribution preparation.

As orders are received, these products are loaded in mixed carloads and truckloads for shipment to hundreds of wholesale and chain store customers.

General's efficient system plays an important role in timing *Procter and Gamble's* distribution with advertising and sales demands in a number of markets.

Modern warehousing is an economy . . . not a cost . . . it's an integral part of Industry. It levels out a variable tempo in distribution and gets products to the retailer at the exact time demanded by sales and advertising.

Above all, it does these things at no capital cost for buildings or equipment . . . and . . . without the risks attendant to owning them. Modern, efficient warehousing is the Safety Valve of Industry.

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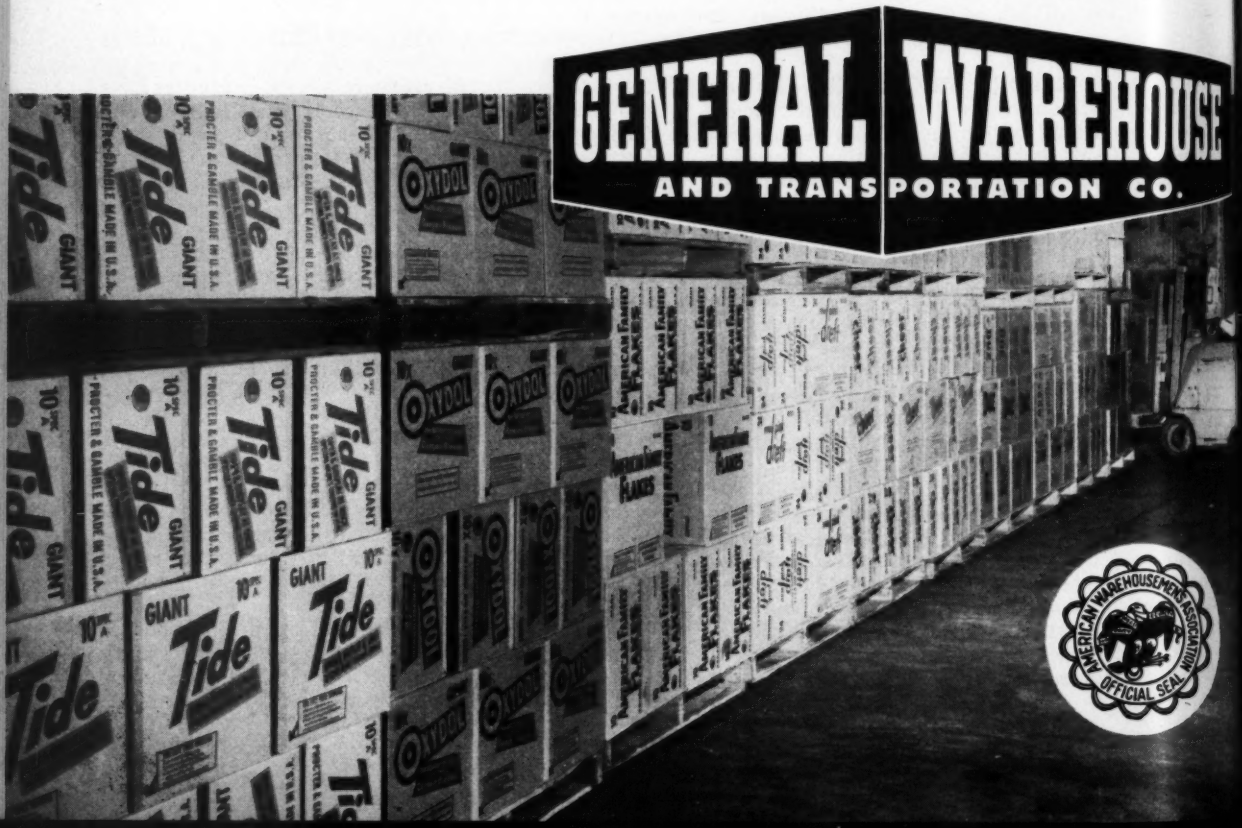


Distribution Employes Gaining Fringe Benefits

APRIL, 1955
Vol. 54, No. 4

Survey of 1,200 companies, representative of 15 million persons, reveals most benefits financed jointly by employer and employe; strong emphasis today on pensions; numerous companies considering profit-sharing plans

BUSINESS is showing increasing concern about the welfare of its employes and dependents, as shown by widespread adoption of private benefit programs.

This trend is revealed in the results of a recent survey by the Chamber of Commerce of the United States about "Private Employe Benefits in Distribution." Summarizing the experience and policies of more than 1,200 leading companies, the survey report describes the use of privately financed hospitalization, insurance and retirement pension programs.

Survey Findings

Hospitalization is available at nine out of 10 companies. Life insurance and surgical benefits are part of the personnel programs in eight out of 10 companies. Nearly half of all distribution companies —large and small—already are embarked upon private pension plans as supplements to "social security."

Union contracts are a minor factor in the benefit picture, according to this survey, although a few benefits are involved to a sizable extent, especially in service businesses. The project was undertaken last year because very little data on private employe benefits have been available to executives of the distribution industry.

Charles G. Nichols, chairman of the National Chamber Distribution Committee said in commenting on the survey results: "For the first time executives have solid facts available on what is being done in their industry to look after the basic human needs of their employes and associates. Distribution now employs more than one-quarter of the nation's wage earners—over 15,000,000 persons. It is vital to know the terms of employment of this large group in our economy and to emphasize again the importance of their welfare and security. Upon these sales and service people in our nation's stores, warehouses and service outlets depends, to a great extent, the economic destiny of this country in the crucial period immediately ahead."

Much of the administration of these employes benefit plans is being entrusted to the insurance industry. For distribution as a whole, 91 per cent of the life insurance plans are entirely handled by insurance companies. Eighty-four per cent use group policy arrangements; seven per cent have individual policies for the covered employes. Another five per cent of the companies having life insurance programs use a combination of methods, in most cases including insurance companies as administrators of part, but not all, of the company's activities in this area. Similarly, 77 per cent of the prepaid medical care plans of retailers, wholesalers and service businesses are administered by insurance companies.

Among the smaller companies, which make up the bulk of distribution businesses, less than 25 per cent now have retirement pension plans. Prepaid medical care plans are found in one out of three distributive businesses, regardless of size. Sick leave is provided by 80 per cent of the companies surveyed. Although half of the companies still administer this benefit on an informal arrangement, over half of the larger firms have set up formalized systems. Among smaller concerns, less than one-quarter now have such programs.

Administrative Detail

Although 50 per cent of the formal sick leave programs, nearly all of the informal sick leave, and 15 per cent of the retirement pensions are taken care of through self-operated company programs, it is evident from this survey that distributive businesses are very willing to turn over the details of record keeping and payment to outside professionals. This is due

(*Please Turn to Page* 64)

185-ton diesel-electric engines supply motive power for these trains

Modern Methods Master Half-Billion

Belt conveyor systems present unique handling technique in overland movement

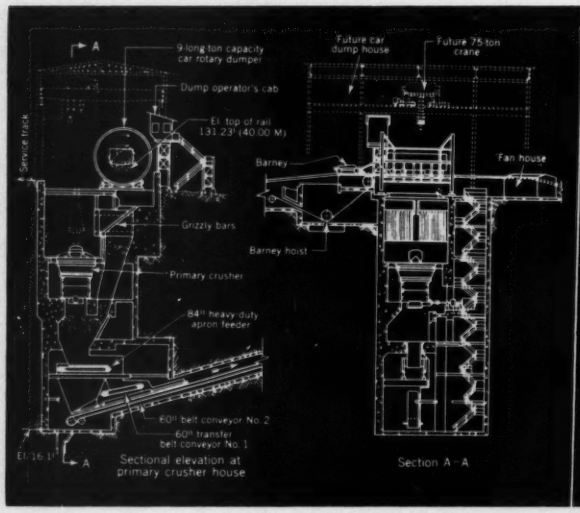
THE MOST important function of the Orinoco Mining Co., in delivering high-grade iron ore from a mountain named Cerro Bolivar, located 90 miles inland from Port Ordaz, Venezuela, is the extensive ore-handling system involved in the over-all operation.

Basically, the system is a transfer station for unloading the ore from mine cars after it has been transported by rail from the mountain, crushing the ore, and stockpiling it on the ground; following which it is reclaimed and loaded into vessels for shipment to world ports.

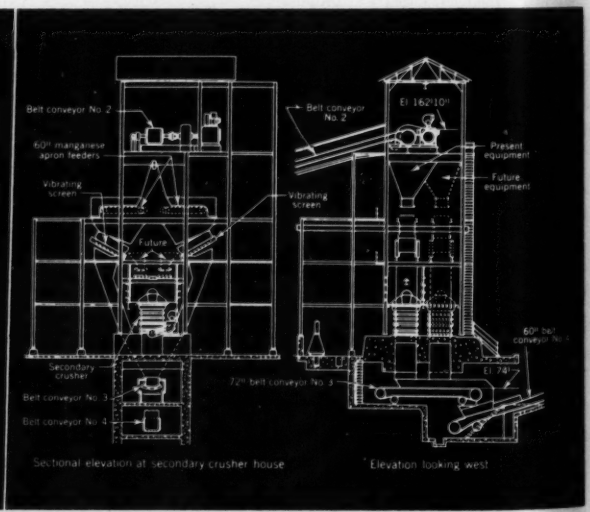
Rail Facilities

Standard gage, heavy rail trackage, heavily ballasted, runs from the mountain, whose iron-topped summit towers 2,500 ft. From the summit to flat country, the railroad has an approximate three per

Rotary dumper dumps 67 cars an hour to primary crusher. Feed from crusher to conveyors, 6,000 tons an hour



At secondary crusher oversize is delivered to opposite sides, or lump ore may be withdrawn by future conveyor



cent grade, creating a breakage problem for loaded trains.

Motive power is supplied each train (average weight—10,000 tons), by three 1,600-hp, 185-ton, diesel-electric locomotives. Additional ballast, (fuel, water, sand) increases the locomotive's weight, resulting in better down-grade traction and braking.

All railroad switches are radio-controlled, and trains are timed, switched and shunted automatically by this electronic method. Approximately three and one-half trainloads of the 65-per cent pure iron ore are moved from mountain to port each day, with the elapsed time for the distance being three and one-half hours for each train, based on a pre-set speed of about 12 mph.

Dumping and Crushing

Ore cars from the mine are received at Puerto Ordaz, uncoupled from the train, and drifted one by one into a conventional retarder, where each is held until withdrawn by a barney haul. The loaded cars are fed into a single-car rotary

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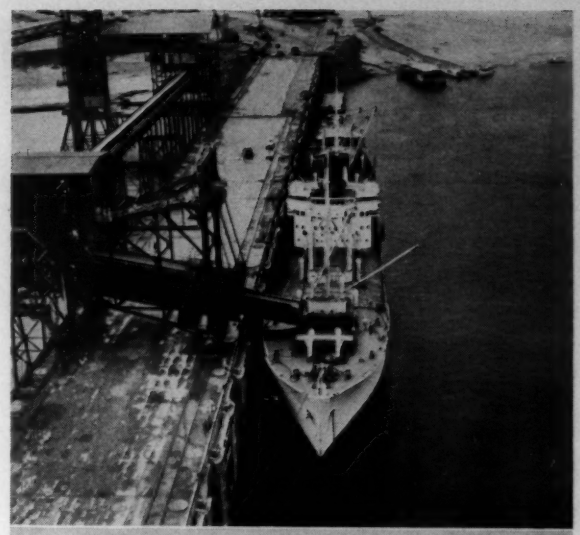
Ton Challenge

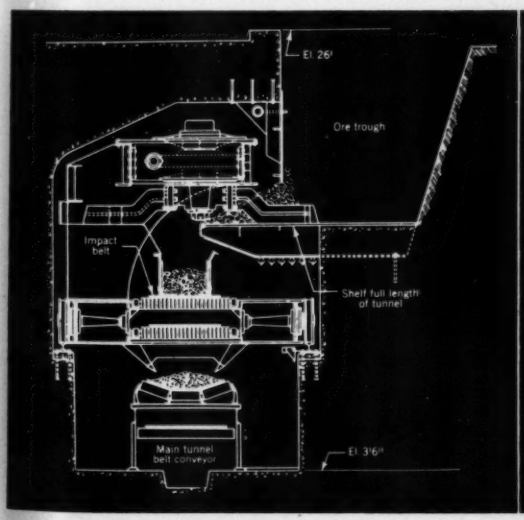
of iron ore at Puerto Ordaz, Venezuela



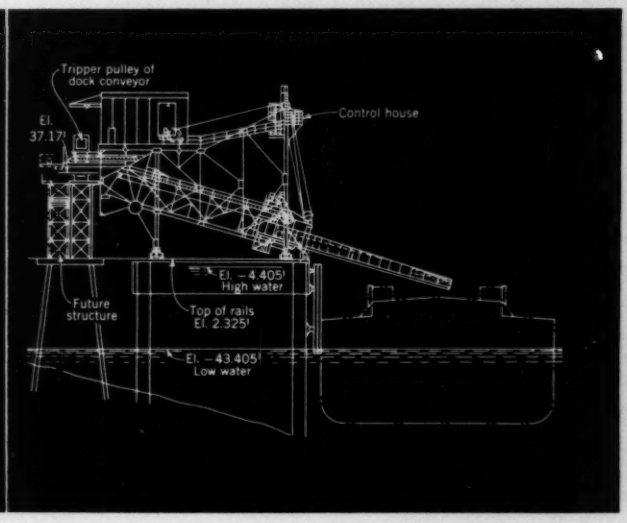
Upper: Ore is loaded, via shuttle belt, on traveling boat loader. Pivotal boom can be raised or lowered some 70 ft

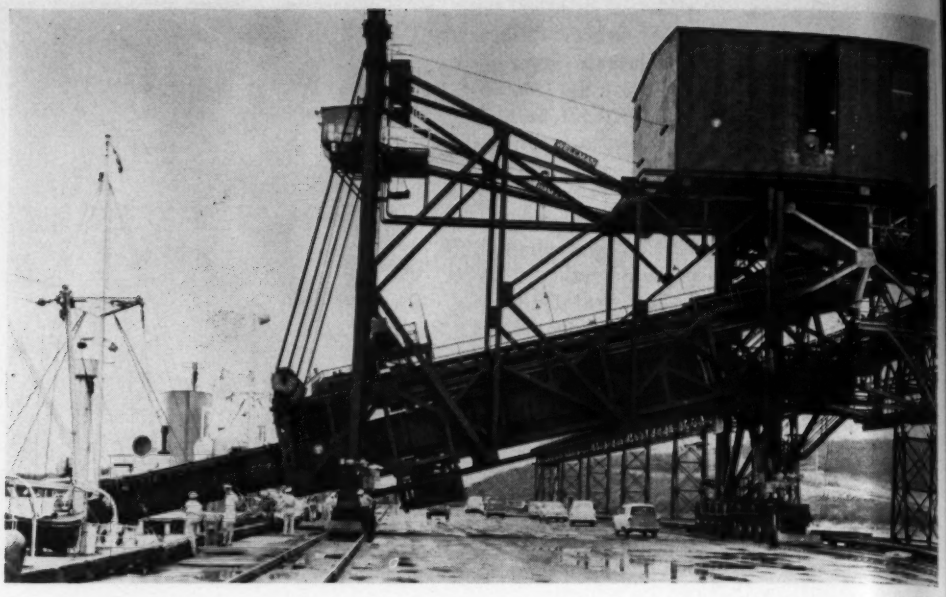
Lower: 53 sec. needed to feed car from pit to dumper, rotate a car, release 90-ton load, right car and discharge

Ore is withdrawn from continuous shelf under storage pile to tunnel belt by traveling rotary-plow feeder



Traveling shiploader can serve vessels of up to 50,000-ton capacity, and compensate for river level variation





. . . Half-Billion-Ton Challenge

(Continued from Preceding Page)

dumper and discharged at the rate of 67 per hour. The loaded car bumps the preceding empty from the dumper and is stopped by track brakes in the dumper.

From the cars, ore is discharged to a scalping grizzly. The oversize flows to a stone box above a 60-in., heavy-duty, open-bottom gyratory crusher. The undersize from the grizzly joins the minus nine-inch crushed product beneath the crusher. This volume provides surge for a uniform feed to the conveying system.

6,000 Tons an Hour

The use of a single 60-in. primary crusher for an unloading capacity of 6,000 tons per hour is based on a crusher capacity of 3,000 tons per hour. Tests showed that rarely will more than 50 per cent of the ore pass over the grizzly.

Obviously, with more than 50 per cent oversize, the crusher will limit the capacity that can be fed to the system.

One feeder is used to withdraw the combined grizzly undersize and the crushed product from a large common outlet. This arrangement provides the means for a uniform feed to the conveyor system in the Link-Belt network.

A system of belt conveyors 60 in. wide is used to handle ore from the primary crushing station to the secondary, and then on to storage at a rate of about 600 ft per minute. The main inclined conveyor is equipped with a steel-cord belt and is driven by a 1,250-hp motor. A special transfer conveyor was installed beneath the apron feeder to reduce wear.

At the secondary crushing plant, the minus nine-inch ore is discharged from a conveyor into a surge and distribution chute from which it is fed uniformly by manganese apron feeders to each of the four scalping screens ahead of the crushers.

For more effective crushing results, oversize from these screens is delivered to opposite sides of the crusher stone boxes. Space is provided between the screens for a shuttle belt on which coarse ore may be withdrawn from the top decks of any or all of the screens.

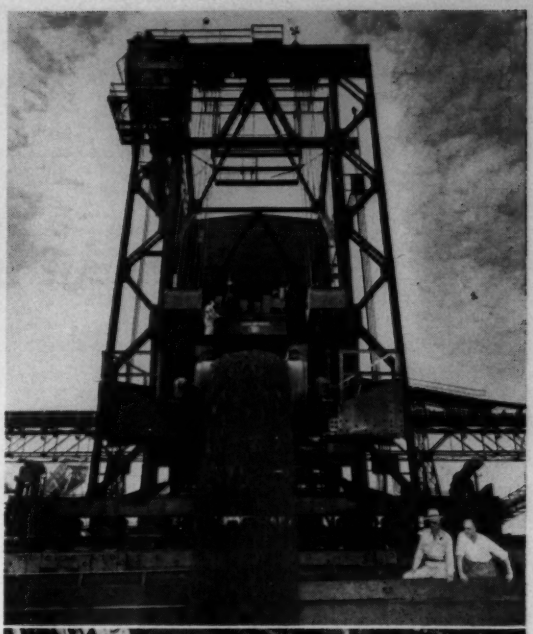
Transfer belts are used throughout the system. These belts are short conveyors equipped with small head pulleys, rubber impact supporting idlers and belts designed to withstand impact and abrasion. All have vertical skirt plates with almost no sloping chutes. They actually take the place of conventional chutes.

Stocking and Reclaiming

From the secondary crushing plant, which passes ore five inches in diameter or smaller, the material is bedded in a 700,000-ton, 80-ft deep stockpile. Stockpiling involves a traveling bridge which has a 400-ft span on track centers, and a 60-in. wide 740-ft long, belt conveyor alongside the pile which delivers to the bridge belt conveyor by means of a special high tripper propelled by the bridge through a draw bar.

With ground storage, a belt conveyor system seemed to provide a practical method of transportation from pile to ship. The problems concerned the method of reclaiming the ore from the pile at rates up to 6,000 tons per hour for each system, and keeping it under control of the shiploader operator over distances up to 3,000 ft.

Two tunnel conveyors, each housed in a concrete tunnel be-



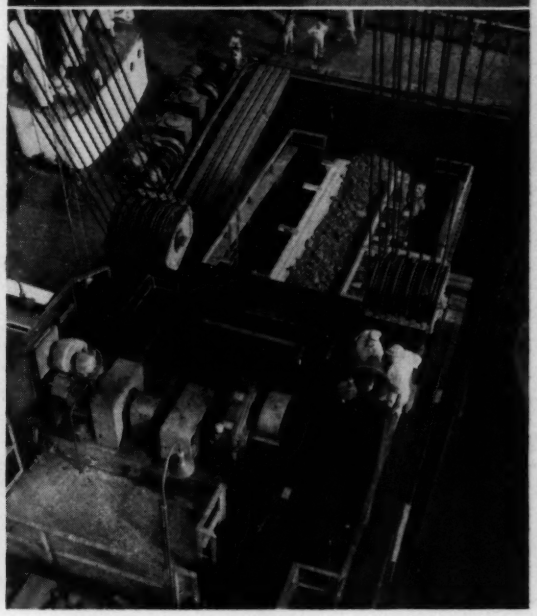
Above: Self-propelled belt conveyor bridge has span of 400 ft. Incoming ore is bedded in a 700,000-ton, 80-ft deep stockpile

Left: Rail-traversing shiploader loads vessels at any point along 630-ft dock, despite annual 39-ft rise and fall of river level

Upper right: One man, in operating cab, controls the speed and capacity of entire reclaiming system from storage pile to ship

Lower right: 72-in. wide belt conveyors on a pivoted boom pour ore into the hold of a ship at the rate of 100 tons per minute

Below: Sampling system removes 60 tons an hour from flow. 5 lb sample is retained, overage returned to Link-Belt conveyor



neath the stockpile, are used for reclaiming the ore. Each tunnel has a steel reclaiming shelf running the length of the stockpile, and two traveling, double-rotary, plow-type feeders which provide for dealing with any sticky type of ore that might be encountered.

The traveling plow carriages carry bladed arms (11 ft in diameter), mounted horizontally, which rotate, scooping the ore from the continuous shelf into a collecting belt. A short transfer belt mounted on a traveling carriage, takes the ore's initial impact following discharge from the shelf.

This transfer belt also assists in regulating the flow and improves the loading conditions to the two 48-in.-wide main tunnel belt conveyors. Two feeders serve one conveyor in each tunnel, which together have a normal maximum capacity of 3,000 tons per hour. However, one can feed up to 2,000 tons in an emergency.

Conveyorized Shiploading

Ore from the two 48-in. wide tunnel belts is transported by a system of 60-in. wide belt conveyors to the traveling shiploader. En route samples are removed and processed in the sampling house,

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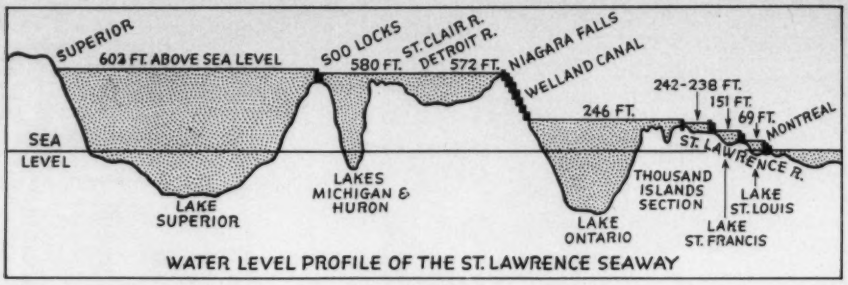
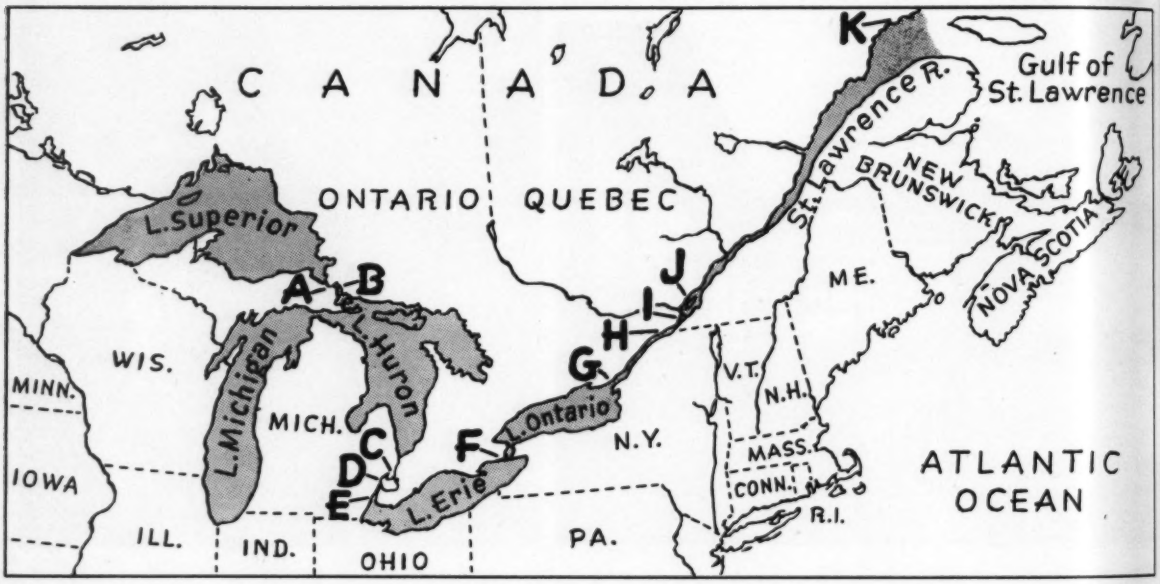


WATER LEVEL PROFILE OF THE ST. LAWRENCE SEAWAY

Distribution Windfall?

Looking at the Seaway From th



Overall view showing—A, Soo Locks; B, St. Mary's River; C, St. Clair River; D, Lake St. Clair; E, Detroit River; F, Welland Canal; G, Thousand Islands; H, International Rapids; I, Soulanges Canal; J, Lachine Canal; K, Sept Isles

WHILE a completed St. Lawrence Seaway still may be a half dozen years from reality, distribution minded Canadians already are envisioning a bright future for Dominion traffic. Here, briefly, are economic and distribution advantages predicted by Canadian traffic people through development of the Seaway:

1. It will allow large lake freighters and other vessels to move freely over 2,200 miles of inland waterway to the heart of the continent.

2. Even with increased tolls, the project will bring an annual saving of millions of dollars in transportation costs to Canadians, their suppliers and their customers.

3. As a six-year project, the Seaway will eliminate a navigational bottleneck in the section between Montreal and Prescott. This section now permits the passage of ships with only a 14-ft draft. This will be deepened to a 27-ft depth to meet most shipping needs for the foreseeable future. (Agreement between the two countries on

By M. M. Gutwillig, *DA Canadian Correspondent*

Although there's a long row to hoe before the Seaway dream becomes a reality, distribution authorities are predicting a Canadian boom

the Canadian Side

the 27-ft depth was reached following a survey of vessels in New York Harbor.)

4. There will be no interruption to present shipping during construction of the Seaway.

5. The Seaway won't prolong the navigational season between Montreal and the Great Lakes. There is little basis to rumors that the flow of waters from power develops will keep the channel from becoming frozen over during the winter months.

New Shipping Pattern

The pattern in which new shipping practices will evolve daily is becoming more evident. It's plain, for instance, that many of the larger lake carriers now plying between upper and lower lake ports in the carriage of grain will move down to Montreal, discharge their grain cargoes there and reload at Sept Isles with iron ore from Labrador destined for Upper Lake ports.

A favorite pastime of journalists and economists has been to speculate on the economic implications—basically distribution savings—for Canada. It's known that it will eliminate much of the present necessary trans-shipment. Obviously, there will be a decrease in freight rates between Europe and the Central Ontario heartland. European exporters are expected to take advantage of this situation. For the Canadian consumer, it is apt to mean lower prices on many European commodities.

Conversely, Canadian western grain farmers should be able to sell their product at least 5 cents a bushel cheaper to overseas markets. British Columbia lumber and apples should become more competitive in Eastern Canada than they are at present. Nova Scotia's depressed coal industry is likely to experience a shot in the arm through cheaper freight to central Canada; a price cut of several dollars per ton is visualized. There is an outside possibility of a cut in steel costs through savings realized by steel mills using Quebec-Labrador seaway-shipped ore.

Canadian Ports

What effect is the Seaway expected to have on Canadian ports along the St. Lawrence and the Great Lakes? Many opinions have been ventured. Some of the optimism appears justified. In other instances, enthusiasm runs to miraculous overnight mammoth ports where there is little basis for such aspirations. Interesting is this comment of long-time distribution expert, Larry J. Stock, superintendent of terminals for Canada Steamship Lines, Ltd., Canada's major ship operator: "I feel the ports that are large now—Montreal, Toronto, Hamilton, Port Arthur—will benefit from the Seaway and become larger. Those lesser spots where the odd boat ties up now aren't likely to suddenly jump to major port status."

Obviously, there are exceptional instances where new port facilities will spring up to cope with new business. Sept Iles (or Seven Islands), Quebec, is almost certain to enjoy a boom when the Seaway comes in. Thanks to the iron ore finds in the Quebec-Labrador region, some 10 million tons a year will flow by rail from Knob Lake to Sept Iles by 1955. And the Iron Ore Company of Canada has predicted that shipments will be doubled once Seaway transportation is available. Furthermore, there is a distinct possibility that grain elevators will be established at Sept Iles as part of its development as a deep water port.

Inland Ports

How do Canada's major inland ports feel about the approach of the Seaway?

Montreal represents an interesting case in point. Time was when Montrealers were apprehensive over the Seaway's implications, feeling that it would pass them by as vessels continued on to Ontario. During the past year, the outlook has changed radically and "the world's greatest inland port" now regards the Seaway as the most prolific contribution to the city's welfare since Maisonneuve first overcame the Indians. Minister of Transport Lionel Chevrier has vowed, "Montreal not only will remain Canada's greatest port, it will become increasingly larger."

It is now freely predicted that the Canadian metropolis will become the largest trans-shipment port in the world. Heavier traffic in and out of the lakes will mean that ships will have to lighten their freight loads in Montreal and also stop-off here on the way out to meet demands for speedier handling.

Large lakers which hitherto couldn't make the trip to Montreal now will dock here rather than

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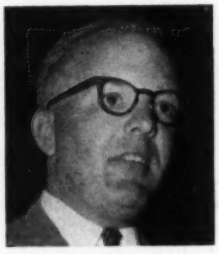
The Integration of Ma

Movement is at best a necessary evil — to be avoided as much as possible. This writer feels that in the near future, management will look upon movement as equal in importance to measurement and modification in industry



By W. F. Rockwell, Jr.
President
Rockwell Manufacturing Co.
Pittsburgh, Pa.

INTEGRATION has particular significance in our day and age. It reflects the tenor of the times not only in the business world, but in our whole manner of thinking, both in science and industry, in schools and in plants.

Today, we're witnessing a change in emphasis from the specialization of knowledge to the integration of knowledge. Many educators believe that, regardless of one's field of endeavor, a man can do a better job after he has had a broader and fuller basic education than he can with a highly specialized course of study.

Management, too, must learn to integrate its approach to planning for, supervising and operating a plant or company. Only by developing a broader, more fundamental outlook can management free itself from the morass of piecemeal activity.

Operations on Matter

Let's take any industrial unit that manufactures a product. Such a unit is representative of every plant in every industry that deals in tangible goods. Broadly speaking, every plant performs three identical operations — operations which I'd like to call "operations on matter."

The "operations on matter" are THE THREE "M's," namely: Measurement — Modification — Movement.

Measurement encompasses the quality and quantity control over a product or a process by the evaluation of dimension, weight, mass, composition, temperature and numerous other factors. Equipment used for measurement can vary from a simple weight scale or foot-rule to complex instrumentation.

Modification encompasses changing the physical or chemical state or form of the matter which constitutes the product. Modification, then, covers every step of the actual manufacturing process from raw material to packaged product.

Movement encompasses the horizontal or vertical transportation of matter from all sources of supply to the plant, within the plant and from the plant to branches, warehouses, dealers and distributors, and eventually to the ultimate consumer of the product at the point of consumption.

The three "operations on matter"—or the three "M's,"—sum up all the direct activities of any company in almost any production cycle. I have, of course, neglected such activities as sales promotion, advertising, accounting, purchasing, and others.

Necessary Evil

Of the three, only measurement and modification upgrade matter. Only measurement and modification give matter greater value after it leaves the plant than when it entered the plant. Movement is at best a necessary evil to be avoided as much as possible. It should be avoided because movement is not of itself a productive operation.

It seems logical that so much attention has been given to improving methods for measurement and modification of matter—the two operations that increase value.

But who has paid attention to movement? Brute physical force still is being used for pushing and pulling, lifting and setting down, bringing in and taking out. In many plants it's marked as a great advance when a lift truck is substituted for a hand cart.

Every unit of matter converted into a salable product represents an expenditure of foot-pounds of energy equal to all the movements required for the manufacture and delivery of the product. That expenditure has as real a price tag as the raw material itself or the labor that goes into the manufacturing process.

The foot-pound energy cost of movement may include the freight charges for incoming castings;

(*Please Turn to Page* 66)

Material Movement

There is a growing recognition of the fact that the entire industrial process is somehow integrated, and that the function of external movement may have an important bearing on what goes on inside of the plant

By M. L. Hurni
Senior Consultant
General Electric Co.
New York, N. Y.

IT IS perhaps a bit trite to observe that there is an increasing awareness on the part of people in industry that the processes of manufacturing—or for that matter the processes of managing—in a particular business do not begin at the receiving dock and end at the shipping dock.

Perhaps it is much better to say that there is a growing recognition of the fact that the entire process is somehow integrated, and that what may be done outside the factory premises may have an important bearing on the structure of the shop itself as well as the manner in which the processes are conducted.

This leads to a more general conclusion that the problem of materials handling outside the factory premises might be subject to the same kind of development as that which has occurred inside the shop in the last decade.

What is most impressive about the handling of materials inside the factory is the hardware—the conveyor line, the transfer mechanism coupling sequences of machines into a single work station, the conversion of batch plants into continuous process. When so presented, the problem seems like a special case well suited for this type of treatment.

By contrast, the case of external transport seems characterized by an overburdening variety that makes similar treatment impossible. This variety ranges from the situation of the job lot manufacturer to the mass producer, the company with local markets to those having wide geographical dispersal. There also is a range of unit values of product and product size to consider as well.

I know I have by no means exhausted the list, but in addition there is another equally long list of variations that affect or are affected by the marketing situation. This includes such matters as customer shipping requirements as they affect lot sizes and frequency, warehousing and method of shipment and overall cost of shipment.

Actually these problems are no more varied and complex than those that confront the individual inside the shop. The difference is that in viewing the case of the shop we are too frequently impressed by the gadgetry of the answer, and not by the logical problem underlying the gadgets whose solution made the gadgets possible.

Objective Scrutiny

This should not be interpreted to mean that we should dash out and conveyorize external transport regardless of the nature of the product or its flow. It does mean that these problems should be examined as logically and as objectively as the internal problems. Some of these internal transport problems have oddly enough had a marked effect upon marketing policy and product design but these things are not apparent to the casual observer in the final result.

This should also not be interpreted to mean that in many instances the present methods are not the best possible any more than it should mean that the shop as it now stands and is organized represents the maximum overall economy to which external transport must adapt and conform to maintain this maximum. The reverse may be the case.

It does mean that the individuals responsible for external transport must be guided by additional tools and ideas than those provided by the route book and schedules of tariffs.

The Logical Problem

It would be presumptuous to suppose, much less state, that the solution to this problem of integration lies in any one particular method of attack. There may be many, but one such method that has proven successful is to first systematically examine the

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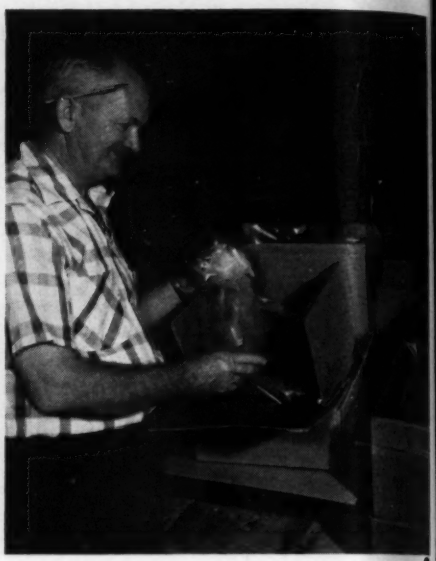
Alive on Arrival

Tropical Fish Travel Safely in

1



2

Polyethelene sacks used in a cardboard carton with a waxed liner have cut costs and lowered loss and damage in shipping valuable tropical fish

TROPICAL fish from Florida's Sunlan Aquatic Nurseries are being carted to market with phenomenal success in a new and improved shipping container. The new package provides lower tare weight, a drastically reduced loss and damage ratio, easier handling, and increased payloads.

The new container utilizes a polyethelyne sack in a cardboard carton with a waxed liner. A secret additive keeps the fish alive in transit.

Switch to Cartons

Five years ago the Miami nursery discarded traditional tins, resembling flattened milk cans, for cardboard cartons with waxed liners. The cans weigh 25 to 30 lb when carrying 150 average-sized fish, and consignees were required to pay one to two dollars for returning an empty.

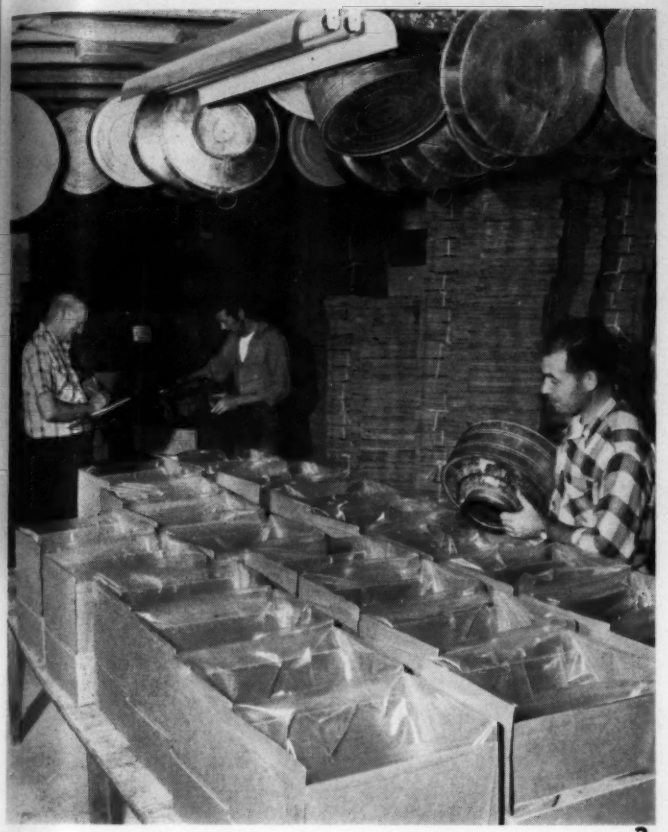
The cardboard container with waxed liner weighed 25 lb and permitted shipment of 200 fish the same size. Since the cardboard containers pack better in airplanes with less loss of fish in transit, most airlines now ban cans for shipping.

More recently, Sunlan developed a new container which, with the additive, permits shipment of 400 fish in a similar-sized package. Both the new and old containers were developed in consultation with engineers and designers of Miami National Container Corp.

Polyethelene sacks are packed into each of the two units of the new package, and more air space has been provided. Waxed liners in each unit continue to prevent leakage. The polyethelene sacks act as further insurance against loss.

The new carton also is flatter than the old. Its

in a Sack



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1. Almost as many fish can be packed in the new cardboard carton (left) as in three cans

2. Polyethelene sack is inserted in wax-lined cardboard carton for double leak protection

3. In the shipping department, live fish and plant life are poured directly into cartons

4. After inner containers are placed in master carton, lid is placed over each of small units

5. This truck is used on test runs between Miami and New York in traffic study

5

dimensions are 15 x 28 x 6 in., as compared to 12 x 22 x 8 in. of the old, or 18-in. diameter cans 12-in. high.

The old cartons were a big step forward in utilizing space in an airplane, and the new containers represent an equal advance.

Protective Qualities

Sunlan reported the case of a recent shipment of fish from Miami to Pearl River, N. Y. The plane made a forced landing in sub-zero weather and was laid up 24 hours. The cartons of fish remained aboard, and no effort was made to feed or aerate them. Yet the consignment arrived in excellent condition.

At New York's Idlewild Airport recently, a pusher truck was hauling a dolly loaded with tins and card-

(*Please Turn to Page* 65)

As period of freshness is short, shrimp-handling shippers use ultra violet light-ray method in determining spoilage

Black Light Spotlights Warehouse Dark Spots

Ultra violet light is used to trace and to eliminate rodents, pilferage and spoilage, and improve efficiency in warehousing

Parts are inspected under black light. Varnish has a fluorescent additive that reveals gaps in application

PARADOXICALLY, black light is illuminating some sore spots in warehouses coast-to-coast. Black light, of course, is ultra violet light under whose rays everything from rodent droppings to pipe leaks fluoresce with characteristic — and telltale — coloration.

Black light isn't new. It is new, however, in its special, and important application to warehousing.

Utility Line Leakage

For example, a midwestern warehouse was plagued by leakage along its utility lines, especially in the air conditioning ducts. Pin-pointing air leaks was difficult, and often impossible. However, warehouse maintenance men recalled that certain fluorescent powders glow luminescent under ultra violet light. Putting some of the powder in the air system's plenum chamber, and with ultra violet lamps in hand, the maintenance crew carefully examined every duct joint. Under the applica-

Parts and goods can be marked with invisible, fluorescent paints, inks and dyes, as a precaution against pilferage

By James Joseph
Bureau Chief, Western Round-Up

tion of black light, air leaks were easily spotted, showing up a brilliant yellow. Based on the powder's invisible coloration, the leaks might have appeared blue, or red.

Rodents Routed

Another warehouse was invaded by rodents. Inspection failed to locate their entrances and exits. Black light was used because rodent urine is naturally fluorescent under the beam of an ultra-violet lamp, and the rodents' paths were easily discernible. They led, moreover, to a hole which visual inspection had overlooked.

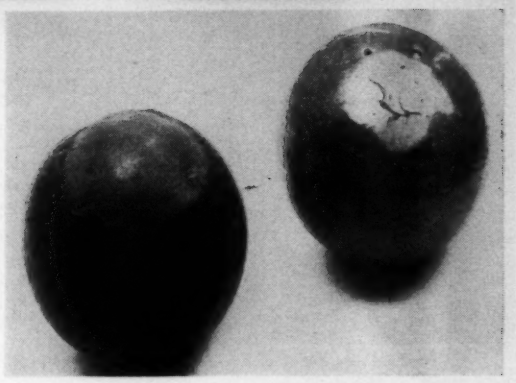
Ordinarily, rodent excretion (particularly urine) can't be seen by the naked eye. Yet rodent urine, and animal hairs fluoresce under black light. Dried rodent urine fluoresces blue white and yellow white. Fresh stains are more blue than old, dried stains. Rodent hairs show a blue white fluorescence under black light. Urine and hair can be easily spotted on sacking or if intermixed with grain.

Positive Identification

Admittedly, some materials fluoresce the same color. This might seem to limit black light's usefulness as a trouble-shooter. This is not the case. Once the contamination has been detected by ultra violet rays, positive identification is easy. The material (cloth, grain, dust) is placed on a piece of Urease-Brom Thymol Blue-Test paper. The material is moistened, then covered with a thin plate of glass. If, under black light, a bluish spot remains after three to five minutes, identification is positive.

Warehousemen are being requested to stamp goods

(*Please Turn to Page* 102)



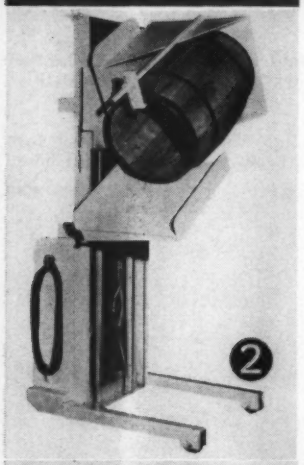
Application of black light discloses blister or brown rot on many types of citrus. Blemish shows up vividly

Portable ultra violet lamps are used to inspect for leakage in piping runs. Leaks show up brilliant blue

Wotizit??

Powered Stacker? Portable Elevator? Pallet Hoist? Tiering Machine? Straddle Truck? Stacker?

1



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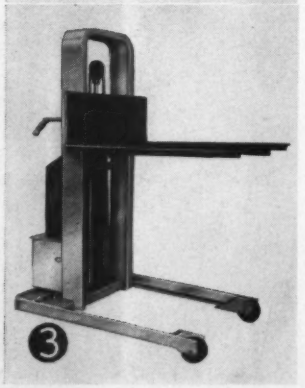


3

The confusion in nomenclature of all materials handling equipment, especially the stackers, works a hardship on maker and user—here is a basic standardization outline

THE breathtaking speed with which new materials handling machines and equipment are developed has resulted in complete confusion in the nomenclature—or classification by title—of such equipment.

Some of the confusion stems from the fact that certain manufacturers, in their anxiety to distinguish their own products from those of their competitors, invent new and different classifications for sales purposes.

Industry Individualism

The lack of standardization caused by this practice of "industry individualism" works a hardship on both the user and the maker. Despite the confusing conglamoration of names, titles, trademarks, and other designations—standardized nomenclature is a distinct possibility. Most of the equipment in question has well defined and easy-to-classify functions and applications.

Fig. 1: Hand stacker with manual propulsion and a manual lifting mechanism

Fig. 2: The next step, a hand propelled stacker with lift power from line current

Fig. 3: Hand propelled with a mechanical lift, this machine uses battery lift power

Perhaps the greatest ambiguity lies in the field embracing handling equipment used prior to the introduction of the unit load principle—equipment on which modifications were made to meet requirements of new handling techniques.

In many cases old names have been retained as-is, or altered through the use of prefixes or modifying adjectives. An interesting case in point can be observed under the all-inclusive classification known as "stackers."

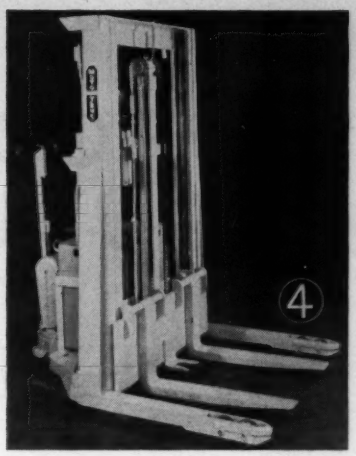
At the beginning of this century, materials handling equipment catalogs consisted largely of hand floor trucks, gravity conveyors, manual hoists, and other elementary tools.

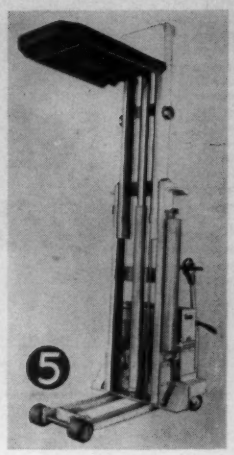
They also included machines known variously as stackers, portable elevators, lifters, hoists, and tiering machines. Most of these names still are in common use. In fact, in one current manufacturer's catalog, the first three of these titles are used in as many pages to designate machines which are basically the same.

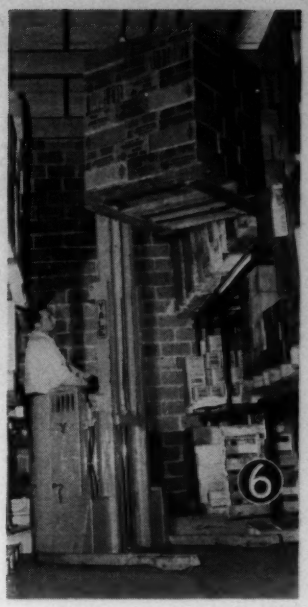
Stacker Definition

In a broad sense, stackers fall in a class of machines which provide vertical motion over fixed

tacker?
Lift?







By D. O. Haynes
DA Materials Handling Consultant

vertical routes with intermittent motion. To quote from DISTRIBUTION AGE, "Basic Guide to Handling Equipment Selection," May, 1954, Page 77; stackers are defined as "elevating machines employing a frame structure with two masts or posts between which moves a carriage with a cantilever platform or other device. A base extends under the load and this supplies stability.

"Although these machines fall in the elevator group, they are not in the same category as freight elevators. They are in most instances portable but are not self-propelling. They are the prototype of the high-lift platform and pallet machines."

Perhaps the simplest way to describe the action of a stacker in supporting its elevated load is to recall how a hospital bed-table with feet which project under the bed is used to hold food, books, etc. without exerting pressure on the patient's legs.

Although the stacker is a portable elevator, not all portable elevators are capable of being used to tier materials. Specialized types are used for such purposes as holding dies, keeping stock at work level, etc.

(*Please Turn to Page* 74)

Fig. 4: Single lift, non ride type with both powered lift and propulsion

Fig. 5. Non-ride powered stacker has a telescopic mast for high stacking

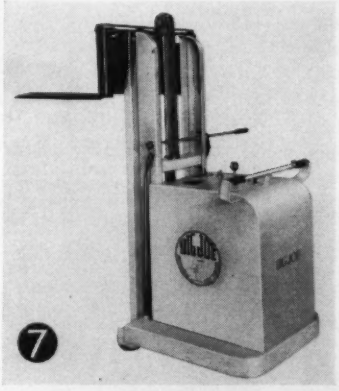
Fig. 6: Ride type with telescope lift. Note outriggers on units 4, 5 & 6

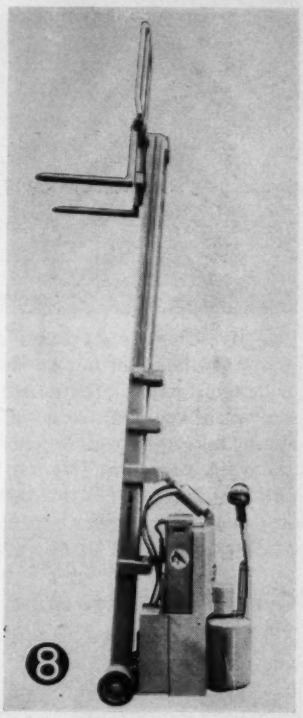
Fig. 7: Counterbalanced, powered unit of single lift and non-ride type

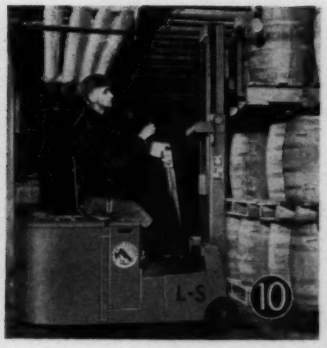
Fig. 8: Non-ride counterbalanced type with the telescopic lift unit

Fig. 9: Single lift, non-ride, battery operated and counterbalanced unit

Fig. 10: Counterbalanced, single lift, riding type stacker, battery powered





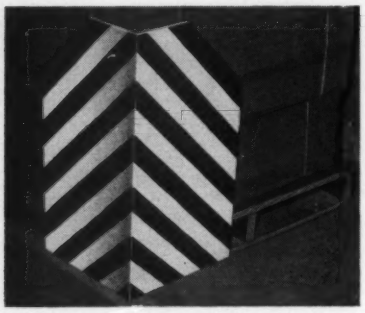


DA NEW PRODUCTS *and* EQUIPMENT

FOR FURTHER INFORMATION USE READERS' SERVICE

Steel Corner Guard

A new, steel corner guard for protection of loads against traffic damage, has been introduced by **Randolph Industrial Equipment**

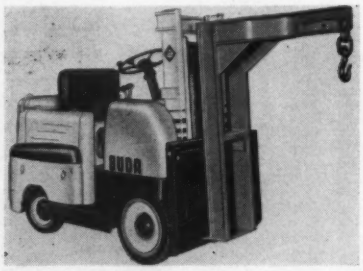


Co. By slipping its steel gusset under the load (either on the floor or beneath pallet), the guard helps to prevent accidents and load damage. The guard can be used with all types of storage — on skids, pallets, floor, etc. Available in two sizes for various sized loads.

Circle 50 on Card Facing Page 53

Crane Arm Attachment

The Buda Co. has developed a crane arm to supplement their



line of attachments for fork lift trucks. The crane arms are available in sizes of 24, 36, 48, 60, and 72 in. Features include adjustable load center; use with or without forks; and reinforced channel steel construction. Special sizes also are available.

Circle 51 on Card Facing Page 53

Hand Truck Line

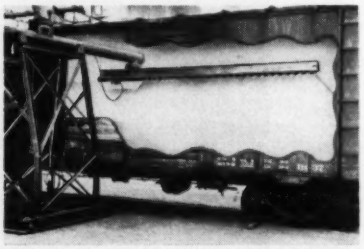
These new hand truck models are designed for one-man handling of floor-type air conditioning units, (Model AV); window type units, (Model AH); and television sets, (Models TV-A and TV-FS). Features include tubular

steel construction, and semi-pneumatic ball-bearing wheels. The trucks occupy minimum floor or ground space. The new hand truck line is manufactured by **U. S. Products, Inc.**, also are designed to meet requirements.

Circle 52 on Card Facing Page 53

Portable Car Loader

A new, portable rail car loader, designed to eliminate dust and

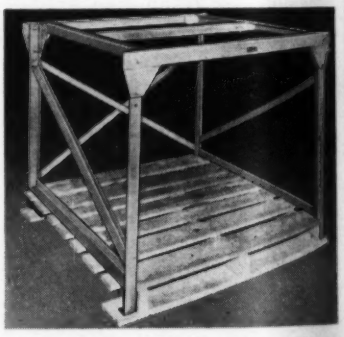


differential settling in loading mixtures of materials, has been introduced by **Valley Foundry & Machine Works.** The unit consists of an articulated screw conveyor system canti-levered from a portable supporting frame outside the box car. The screw conveyors carry the material through the door of the box car and distribute it along the length of the car in the open bottom section The frame is easily moved by one man. The loader has an average capacity of 20 tons per hour.

Circle 53 on Card Facing Page 53

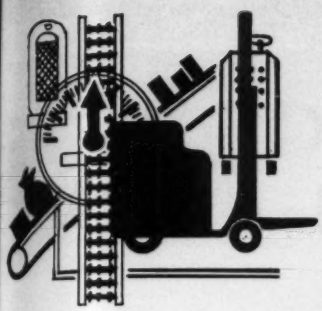
Pallet Frames

The new steel pallet frames, manufactured by **The Frick-Gallagher Mfg. Co.**, are set on standard 48-in. wood storage pallets to permit easy stacking by fork lift trucks and servicing



of loads stacked near the bottom. Each loaded pallet rests on the steel frame below, putting no crushing weight on loads underneath. Dimensions of frame: 48 in. square, 41-⅝ in. high. Load clearance: 36 in. Each frame will support up to 7,000 lb stacked above it.

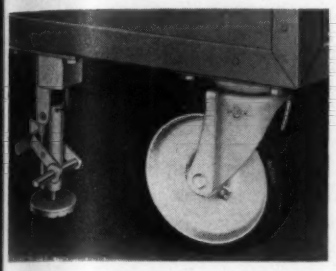
Circle 54 on Card Facing Page 53



CARD....PAGE 53

Castered Truck Lock

A new, retractable position lock for castered trucks which the manufacturer claims allows 200 per cent more ground clear-

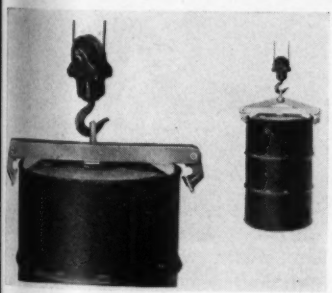


ance has been introduced by **The Bassick Co.** Designed for use with the 6-, and 8-in., H99 Series industrial casters, the new lock offers 3¼-in. ground clearance when retracted, in comparison to the 1-in. clearance afforded by other types.

Circle 55 on Card Facing Page 53

Vertical Drum Lifter

This new and improved vertical drum lifter, manufactured by

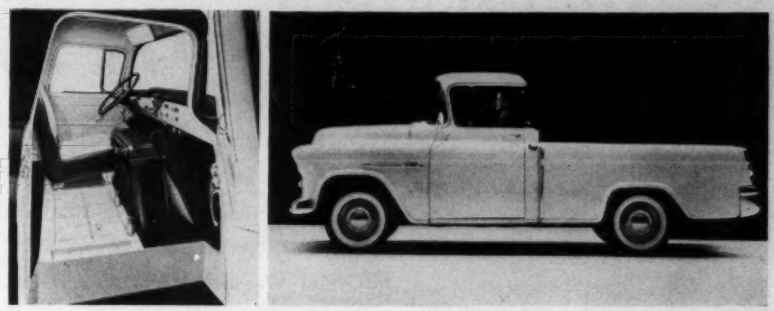


the **Palmer-Shile Co.**, handles open and closed steel drums in vertical position, by crane or hoist.

Circle 56 on Card Facing Page 53

Chevrolet Introduces New Truck Line

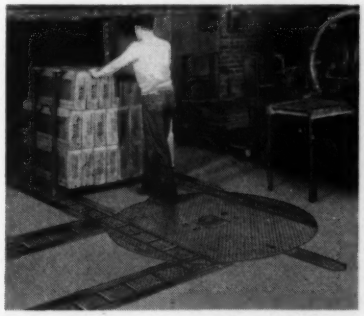
A new 1955 truck line, consisting of 75 models on 15 wheelbases in the light, medium and heavy-duty field, recently was presented by **Chevrolet.** This is an increase of four wheelbases over 1954 models. Most wheelbases have been reduced, some as much as eight inches, as it has been found that restricted parking and loading facilities make vehicular lengths objectionable. Wider panel bodies are used with a consequent gain in load space. The new width should gain the approval of truckers handling bulk loads. The Cameo Carrier (above right), a new pickup, makes pioneering use of reinforced glass fiber panels. A reduction has been made in maximum cab heights, up to seven inches on new low-cab-forward models. The new V-8 engine is standard on this model. The new trucks also have wider front treads, straight frame side members, and improved suspensions. Cabs are roomier with added latitude in seat adjustment. Notable is a gain in window area, adding up to 36 per cent in visibility and marked in all models by "sweep-sight" windshields.



Circle 57 on Card Facing Page 53

Trackage System

The double trackage system for moving skids and pallets has been announced by the **Engineering Products Co., Inc.** The rolling function is performed by the trackage itself which consists of

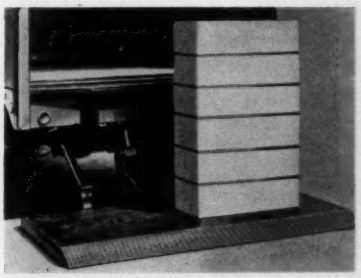


a series of rollers, containing sealed ball bearings specially designed for floor operation. A special flat bottomed dolly glides easily over the track rollers when pushed by one man. Any kind of a load can be carried on a skid which bridges two parallel rows of trackage.

Circle 58 on Card Facing Page 53

Elevating End-Gate

St. Paul Hydraulic Hoist has announced a new elevating endgate which, it is claimed, reduces delivery costs and special plant materials handling expenses up to 50 per cent. The new gate lifts or lowers loads up to 2,000 lb.



Full power operation, including power closing, complete safety controls, and simplified design are major features. Dual safety latches lock the gate securely at the truck bed. Standard or ramp type platforms are available in four sizes, with loading areas of 84x28, 90x28, 84x34, and 90x34 in.

Circle 59 on Card Facing Page 53

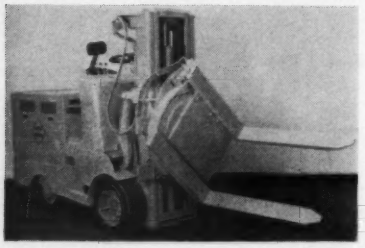
(*Please Turn Page*)

NEW PRODUCTS and EQUIPMENT

Continued from previous page

Rotating Unit

A new, rotating unit for use on its line of electric-powered fork trucks has been developed by **The Elwell - Parker Electric Co.** The unit is designed for a wide variety

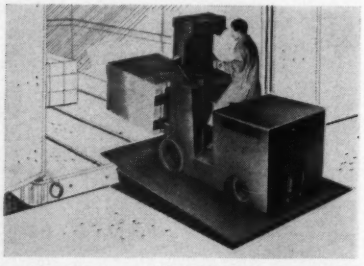


of dumping and turning operations, provides 360 deg continuous rotation, and can handle up to 10,000-lb loads depending on the basic truck capacity. The unit is powered by a gear type hydraulic motor driving through a worm and gear reduction unit.

Circle 60 on Card Facing Page 53

Loading Dock

Hartman Metal Fabricators, Inc., announces a new Power Dock for truck and freight car loading. Features include a retractable lip,



extending a full 24 in. over tail gate or steps, and capable of supporting up to 20,000 lb. Dimensions may be adjusted to required specifications. Button control governs movement of the dock plate, which automatically "floats" with truck bed level. The machine is operational under all weather and working conditions.

Circle 61 on Card Facing Page 53

Power Sweeper

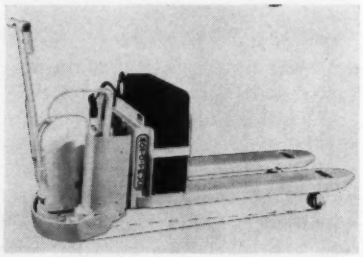
The Wayne Mfg. Co., has recently started production on a new 4 model line of power sweepers for industrial use. All models feature dust control with easily

removable dust bin, automatic dumping, large hopper capacity, 20-in. curb brooms, and electrically welded heavy plate steel construction. Range of sweeping paths are from 24 to 58 in., with a maximum sweeping coverage of over 100,000 sq ft per hour.

Circle 62 on Card Facing Page 53

New Addition

The newest addition to the **Moto-Truc** "Jack Knife" line of



trucks is the pallet model. This makes the newly designed action available on pallet as well as high-lift type trucks, and now raises the truck frame to provide sufficient clearance over uneven floors or sharply rising ramps. The difference in the truck clearance angle eliminates hang up and increases the operational range of walkie type trucks. This action, accomplished by a hydraulic pump and ram unit, now is optional on the complete line of walkies.

Circle 63 on Card Facing Page 53

Automatic Sealer

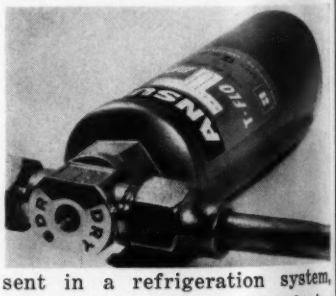
Lipton Mfg. Co., Inc., announces the introduction of a new Walters automatic sealer, Model 60, with front-press-down handle. The new

sealer takes 500-ft rolls outside gummed tape from ¾ in. to 1½ in. wide. It feeds strips 7½ in. long, repeat for longer length. A press of the handle automatically moistens, measures to length desired, and cuts tape.

Circle 64 on Card Facing Page 53

Moisture Detector

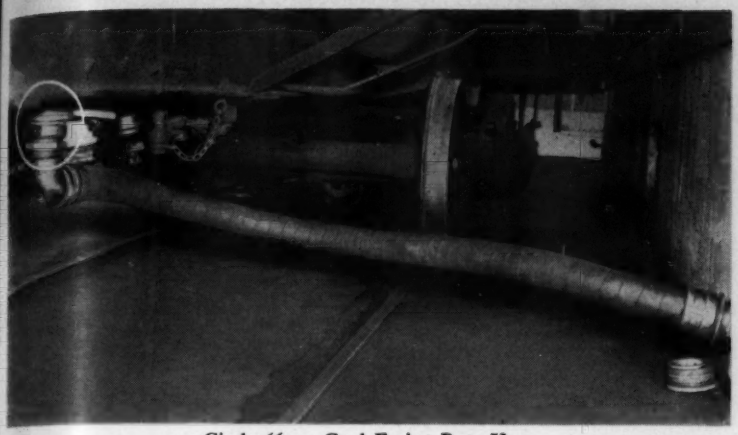
A new device has been developed by the **Ansul Chemical Co.,** which performs the dual job of indicating when moisture is pre-



sent in a refrigeration system, and then removing it. The device makes it possible to see and analyze the approximate moisture content of the refrigerant without shutting down the system.

Circle 65 on Card Facing Page 53

Tank Car Unloading Arrangement

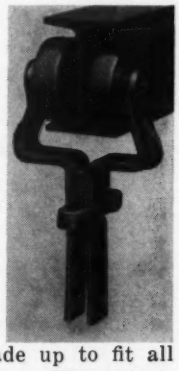


Circle 66 on Card Facing Page 53

A way to cut down the labor and increase the safety of an operation common in many industries—unloading of tank cars, has been introduced in the form of a unique hose coupling unit manufactured by **Titeflex, Inc.** Liquid is piped directly from tank car into storage tanks, etc. Flexible hose connects discharge fitting on underside of car to tank inlet. Quick-seal couplings at both ends of hose permit rapid connection of hose to tank car and storage tanks, and prevent oil leakage at discharge point. Couplings require no tools for connecting to discharge fitting and can be connected by one man in a few minutes. As most tank cars are equipped with a permanent threaded discharge fitting, a threaded quick seal coupling nipple is used. By providing handles on this nipple, it can be screwed on without use of a wrench. When the nipple is inserted in the coupling and the collar released, the nipple end of the coupling sits solidly against the seal ring. The coupling becomes sealed the instant the coupling is fully closed.

Trolley Conveyor

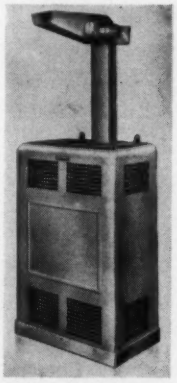
An improved line of overhead trolley conveyors, model 228, now is being manufactured by **Rapistan-Keystone, Inc.** Designed for medium duty use, the new conveyor is prefitted and match-marked at the factory. From standard components of I-beam track; drive and take-up units; trolleys and drive chain; systems can easily be made up to fit all types of operations. The unit is the open-track type, with all parts completely accessible for lubrication, cleaning and repair. There is no chain drag as the chain rolls on a trolley.



Circle 67 on Card Facing Page 53

Refrigeration System

A non-mechanical truck refrigeration system that requires no maintenance is being used where a high-moisture, constant temperature of 40 to 45 deg F is required. The **Air Induction Conditioner** units use natural water-ice, and operates on the principle that warm air rises. Warm air is drawn from the top of the truck, circulated over the ice, and forced out along the truck floor. All the air in the truck is completely rewashed and cooled every 2 or 3 minutes when the unit is in operation.



Circle 68 on Card Facing Page 53

Attachment Device

Sherman Products, Inc., now is marketing a fork lift attachment for tractors for mechanized materials handling on off-pavement surfaces. The ability of the unit, designed for use on tractors, to operate on unpaved or rough terrain brings the advantages of mechanized materials handling to industries which cannot utilize the standard industrial fork lift truck because of its low clearance, narrow tire treads and small wheels. The attachment operates hydraulically, and will lift a load up to 4,000 lb, 10 ft into the air.

Circle 69 on Card Facing Page 53

Plastic Flooring

A new, ready-to-use floor resurfacing material that is reputed to be smoother, easier to apply, and capable of withstanding heaviest traffic within one minute after application, is announced by **The Monroe Co., Inc.** The new plastic flooring will withstand 50,000-lb loads 60 seconds after application. In addition to resurfacing, the new material also is excellent for floor patching. It can be applied over wood, concrete, brick or steel—indoors or out.

Circle 70 on Card Facing Page 53

(*Please Turn to Page* 60)

FREE Literature

So You're Moving

"So You're Moving," and "How to Move and Like It," are the titles of two booklets being distributed by **North American Van Lines.** The booklets outline all phases of NAVL service, including packing, loading, transport, unloading, and storage.

Circle 76 on Card Facing Page 53

Gas vs. Electric

A new folder, "Facts About Fork Trucks—the Gas vs. Electric Question," has been published by **Lewis-Shepard Products.** The folder presents a study of the capabilities of gas and electric powered trucks operating under normal conditions. It includes 12 Facts Sheets and two maintenance forms.

Circle 77 on Card Facing Page 53

Modern Shipping

A file-folder kit, containing descriptive literature on various systems for modernizing shipment addressing and marking operations, and simplifying shipping paper work, is available from **Weber Label and Marking Systems.**

Circle 78 on Card Facing Page 53

Innocence Abroad

"Innocence Abroad," or "World Trade in 10 Easy Lessons," is the title of a cartoon-type booklet prepared by the **American Tariff League.** It relates the adventures of one Willoughby Lowdermilk, a fictitious young executive trying to sell his company's products at home and abroad.

Circle 79 on Card Facing Page 53

Case Load-O-Meter

Loading supervisors and dock workers can dial the proper loading pattern for the commodity they are stowing in railroad freight cars with a Case Load-O-Meter being distributed by the **Union Pacific Railroad.** Various case goods sizes are printed around the rim of 6-in. dial. When the size being stowed is dialed to a window in the face of the meter, the proper pattern is shown, with directions for stowing second and third layers.

Circle 80 on Card Facing Page 53

Warehousing Service

A folder describing warehousing facilities and services has been offered by the **Warehouse Point Co.** The booklet points out how manufacturers can cut costs by assigning warehousing, packaging, and distribution problems to specialists. Services offered include rail and truck service, packaging, shipments, records, protection, etc.

Circle 81 on Card Facing Page 53

BOOKS

Time & Motion Study

Now available are the proceedings of the 18th Annual National Time and Motion Study and Management Clinic of 1954. The 176 pages include charts, forms, and illustrations. **Industrial Management Society,** 35 E. Wacker Drive, Chicago 1, Ill. 176 pp, $5.

Conveyors and Equipment

The third edition of Wilbur G. Hudson's "Conveyors and Related Equipment" has been published. Considerably revised, the book takes into account the improvements in the construction of conveyor belts during the past 10 years, and gives the current outlook on the saving of time, storage space, and labor costs. **John Wiley & Sons,** 440 Fourth Ave., New York 16, N. Y. 524 pp, $9.

New England Ports

Publication of a revised report of six ports of Southern New England has been announced by the Department of the Army. The ports include Providence, R. I.; Fall River, Mass., and New London, New Haven, Bridgeport, and Stamford, Conn. It includes details of operation, administration, facilities, services, port and terminal charges, communications facilities, and the flow of traffic. **Superintendent of Documents, Government Printing Office,** Washington 25, D. C. 315 pp, $2.

Elevating Tailgate

A 6-page bulletin showing the Heiloader elevating tailgate in action has been printed by the **Heil Co.** Special attention is given to the new 4,000-lb capacity loader. A general catalog of hoist and body equipment also has been offered by **Heil.**

Circle 82 on Card Facing Page 53

Adjustable Containers

Signode Steel Strapping Co., in a new 4-page folder, gives an illustrated description of its new method of packing articles or packages of different shapes and sizes. The new method employs adjustable fibre board sections, telescoped together to form an outer container.

Circle 83 on Card Facing Page 53

Blue Book of Packaging

Gerrard Steel Strapping Div., U. S. Steel, has published a new edition of its "Blue Book of Packaging." The book gives steel strapping technical data, and a complete description of strapping tools, supplies, and equipment.

Circle 84 on Card Facing Page 53

Floor Truck Facts

The **Hamilton Caster & Mfg. Co.** has offered a new 64-page catalog illustrating and describing the firm's complete line of platform trucks, two-wheel hand trucks, shelf and tray trucks, box trucks, wagon trucks, skids, dollies, etc.

Circle 85 on Card Facing Page 53

Forward Control Body

Literature on the new Routemaster Forward Control Body is available from **Herman Body Co.** The new Routemaster is available in aluminum or steel construction and is designed for mounting on all standard forward control truck chassis.

Circle 86 on Card Facing Page 53

Operator's Booklet

The sixth printing of the "How to Operate a Lift Truck," booklet has been completed by **Hyster Co.** The 24-page cartoon-type booklet is offered to lift truck operators, supervisors, safety engineers, etc.

Circle 87 on Card Facing Page 53

Warehouse Conveyors

Truckveyors, a dragline conveying medium designed to reduce the unit cost of materials handling in warehouses, truck, and railroad terminals are described in **Link Belt Co.** book No. 2497.

Circle 88 on Card Facing Page 53

Flooring Development

A new flooring development, called Stonpach, is illustrated and described in a new, pocket-size folder, released by the **Stonhard Co.** The patching material is designed for durable patches or complete overlays where acid, grease and oil conditions have pitted and destroyed concrete surfaces. Only ½-in. thickness is necessary for a finish that resists breakdown.

Circle 89 on Card Facing Page 53

Tractor Cab

Cabs for Caterpillar HT4 Traxcavators are pictured and described in a catalog sheet recently issued by **Crenlo, Inc.** The cab's construction, dimensions, installation, and optional accessories are listed.

Circle 90 on Card Facing Page 53

Handling Line

A new catalog, No. 55, containing 40 pages of photographs and useful information on the complete line of materials handling and overhead service machines, has just been produced by the **Economy Engineering Co.**

Circle 91 on Card Facing Page 53

Re-Usable Containers

Peters-Dalton, Inc., has published a 16-page brochure, technical bulletin No. 601, which illustrates and describes how many advantages can be gained by packaging, storing and shipping industrial materials in scientifically constructed re-usable metal containers, as contrasted to outmoded packaging and shipping methods.

Circle 92 on Card Facing Page 53

Conveyor Catalog

A new catalog, illustrating and describing various types of conveyors, has been released by **Samuel Olson Mfg. Co.** The catalog includes a wide range of types and sizes, especially adapted to loading and unloading, storage, warehousing, order picking, etc.

Circle 93 on Card Facing Page 53

Container Design

Publication of a new, 24-page brochure on "Duty Designed Cargotainers" was announced by the **Pittsburgh Steel Products Co.** The illustrated booklet provides technical details on these welded steel wire mesh containers, and the advantages they offer in materials handling. It is implemented with case history examples of cost reduction accomplished in a wide variety of industries. Also included is information on the application of welded wire pallets and industrial bulkheads.

Circle 94 on Card Facing Page 53

Electric Truck Line

A 24-page catalog, illustrating and describing its complete line of electric trucks, now is being offered by the **Raymond Corp.** The literature features the firm's line of battery-powered, rider-type trucks for 6-ft aisle operation, together with attachments. Design drawings and complete specifications also are available.

Circle 95 on Card Facing Page 53

FILMS

Movement is Life

"Movement is Life" is the title of a new 20-minute, 16-mm motion picture sponsored by the **Conveyor Equipment Manufacturers Assn.** The scope and variety of jobs done by conveyors throughout industry are depicted in scenes of actual installations.

Circle 102 on Card Facing Page 53

Materials Handling

A series of three films has been made available by **Hyster Co.** The films include descriptions of the handling system in a typical modern wholesale grocery warehouse, cargo handling at the Great Northern Railway, and materials handling with the **Hyster** box grab.

Circle 103 on Card Facing Page 53

The Perfect Crime

A new film on highway safety, "The Perfect Crime," has been released through its dealers by **Caterpillar Tractor Co.** The 20½-minute, sound and color film is presented by Caterpillar in cooperation with the **National Safety Council's Construction Section,** and members of the **Associated General Contractors of America.**

Circle 104 on Card Facing Page 53

Destination America

A 25-minute, on-line, documentary motion picture has been made available by the **Western Pacific Railroad.** Every phase of **Western Pacific** operations is covered showing how this railroad serves industry and agriculture.

Circle 105 on Card Facing Page 53

Twelve-Handed Typist

How to cut shipping costs with multiplex labels is outlined in a folder prepared by **Allen Hollander Co.** The system, which enables you to type six labels at one time without the use of carbons, stencils, or previous preparation, was designed for multiple shipments.

Circle 96 on Card Facing Page 53

Spray Type Ink

D&A Co. has issued a catalog sheet on its Quickspray stencil ink. The sheet illustrates uses of the stencil ink, in an aerosol dispenser, in shipping, inspection, color coding, design layout, etc.

Circle 97 on Card Facing Page 53

Bulk Handling Equipment

A new booklet, recently issued by the **Dravo Corp.,** illustrates the bulk materials handling equipment used for many different types of mill, plant, and dock operations. Engineering features, performance and efficiency facts, and design drawings are included in the booklet.

Circle 98 on Card Facing Page 53

Hand Truck Line

A new, 84-page catalog, No. 55, which describes the complete line of trucks, trailers, casters, and wheels for industry, has been released by **Thomas Truck & Caster Co.**

Circle 99 on Card Facing Page 53

Industrial TV Equipment

Catalog E51, just issued by **Radio Corp. of America,** describes the new ITV-6 industrial television equipment manufactured by the company. Features, applications and construction details on ITV-6 closed circuit television are illustrated and described. Specifications also are listed.

Circle 100 on Card Facing Page 53

Crane & Hoist Data

Bulletin No. 44, entitled, "How You Can Have Safe Electrification For Your Cranes and Hoists," and detailing the advantages of the system of enclosed trolley busway electrification, has been released by the **Feedrail Corp.**

Circle 101 on Card Facing Page 53

For prompt service, use the postage-free postcard provided here for your convenience in securing FREE LITERATURE and NEW PRODUCTS information described in this issue of DISTRIBUTION AGE. All material FREE, unless otherwise noted, as in the case of text books and some pamphlets.

Fork truck placing a pallet load of empty jars, in cartons, at the peanut butter producing and packing machine

At the other end of the line, filled jars are replaced in the cartons and palletized for fork truck movement

Single Fork Truck Boosts

In addition to the 300 per cent production increase, the palletization and fork truck operation at the Bell Brands food processing plant, Los Angeles, has effected some substantial space savings through the use of overhead space

A STREAMLINED handling and storage operation—built on the services of a single 2,000-lb-capacity fork truck — increased production 300 per cent at the Los Angeles food processing plant of Bell Brands.

In addition to production increases, the fork truck-palletization system effected considerable space economies through utilization of previously wasted air space.

The plant is all on one floor, except for a small storage area on a balcony. Raw materials are received at a loading dock at the rear and along one side, although two receiving doors on the opposite side of the building can be used.

Raw material such as potatoes, shelled corn and shelled peanuts are delivered by truck. The bags of corn are palletized at the dock and the lift truck transports the loads from the dock to the storage area. When these items are needed in the production lines they are moved from storage to the proper area.

The lift truck is used constantly on an average of 10 hours a day in various handling operations at different parts of the plant without disruption of routine operation.

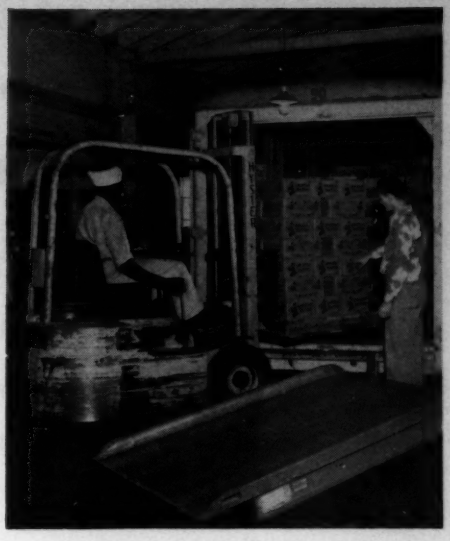
For example, one of the jobs assigned to the lift truck is keeping a pallet load of empty glass jars by the operator of the peanut butter filling machine. These empty jars are stored on pallets near the butter production and filling machine and moved into position as needed.

Cases of filled jars are taken away and stored until needed for delivery in the area on the opposite side of the room. The lift truck is, of course, also used to load out shipments at the dock.

Potato chips which, though bulky, are extremely light and not handled by the lift truck.

Shoestring potatoes are placed in large cans as they come off the production line and then transported to the packing line on floats. They are not only sealed in cans, but also put in cartons then palletized.

Pallet load of peanut butter is removed from the storage area for transfer to truck loading dock



From storage, the fork truck travels direct to truck dock for shipment

Volume 300%

Supplies of boxes and cartons are stored flat on pallets and moved to and from storage by fork truck

More stable items are packed in cans and placed in a balcony storage area

The lift truck transports these pallet loads through the plant to a storage room and the overflow of production is moved to a storage balcony. Shoestring potatoes are a more stable item and the productions runs can be longer and stored for a greater length of time.

Supplies of cartons and boxes are stored flat on pallets and handled by the lift truck to and from the storage room. All lightweight items which are not practical for handling by the lift truck—especially those which cannot be stacked—are moved by skid and jack.

Although the volume of handling is not too great, drums of shortening, each weighing about 550 lb gross, are loaded three to a pallet and delivered to the kitchen area by the lift truck.

One of the most important jobs assigned to the lift truck is the periodic moving of certain production machines and equipment for cleaning and adjusting. The potato slicer, for example, is removed from the line after each run.

Because of the size and weight of these items it formerly took four or five men considerable time to do this job. The lift truck now accomplishes it in a matter of minutes with only one man needed to guide the unit into place.•

Cost Control in the Terminal

A joint committee on terminal cost control is studying this basic system in an attempt to standardize methods

COST control in motor truck operations is the subject of an extensive study being made by the Joint Committee on Terminal Cost Control of the National Accounting and Finance Council and the Operations Council of ATA. The committee is under the chairmanship of M. C. Benton, Jr., vice president and comptroller, McLean Trucking Co.

At the initial committee meeting during the latter part of 1954, the group considered an elementary system of cost controls developed by Ellis Goode, ATA accounting consultant. The committee plans to use this system as a basis for the development of additional steps that can be added to the system until it is so organized that carriers of any size can use all or any part of it.

Goode's system, based on the three simple forms shown at right, was designed in an effort to adhere strictly to two basic elements:

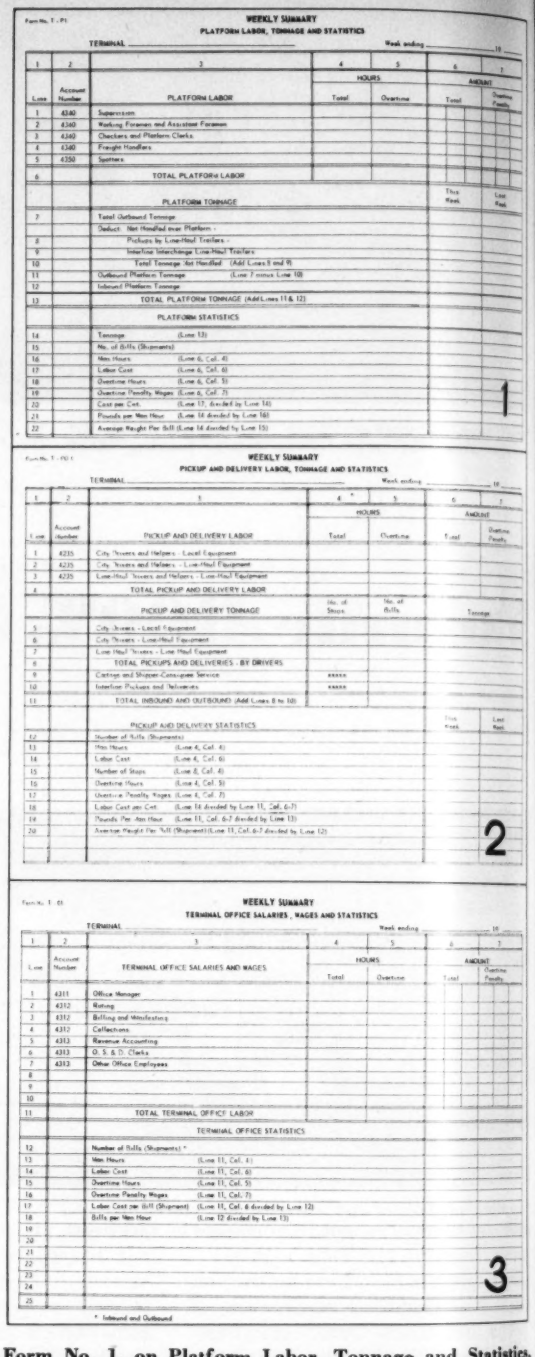
1. The creation of an elementary system of cost controls based on a minimum number of basic forms of simple design, and;

2. A system adoptable by the smaller or marginal Class I carriers, as a means of improving terminal operating efficiency through the widespread adoption of uniform standards and measurements.

Goode explained that his system and forms represent a condensation of primary data, and a regrouping of such information into basic and generic classifications, of material originally presented in 1951 by the Regular Common Carrier Conference report of "Terminal Cost Controls for Management."

The forms submitted were said to represent the media for the summarization of terminal cost data. Many source records, such as payroll, tonnage, operations, etc., must be relied on as a basis for the proposed records. In this connection, Goode suggested that the text accompanying the forms ultimately approved should contain definitive outlines and suggestions concerning generally accepted and practical accounting and clerical methods for the maintenance of source records.•

The Three Basic Forms



WEEKLY SUMMARY
PLATFORM LABOR, TONNAGE AND STATISTICS

TERMINAL _____ Week ending _____ 19

Line	Account Number	PLATFORM LABOR	HOURS Total	HOURS Overtime	AMOUNT Total	AMOUNT Overtime Penalty
1	4340	Supervision				
2	4340	Working Foremen and Assistant Foremen				
3	4340	Checkers and Platform Clerks				
4	4340	Freight Handlers				
5	4350	Spotters				
6		TOTAL PLATFORM LABOR				

		PLATFORM TONNAGE	This Week	Last Week
7		Total Outbound Tonnage		
		Deduct: Not Handled over Platform -		
8		Pickups by Line-Haul Trailers -		
9		Interline Interchange Line-Haul Trailers		
10		Total Tonnage Not Handled (Add Lines 8 and 9)		
11		Outbound Platform Tonnage (Line 7 minus Line 10)		
12		Inbound Platform Tonnage		
13		TOTAL PLATFORM TONNAGE (Add Lines 11 & 12)		

	PLATFORM STATISTICS		
14	Tonnage (Line 13)		
15	No. of Bills (Shipments)		
16	Man Hours (Line 6, Col. 4)		
17	Labor Cost (Line 6, Col. 6)		
18	Overtime Hours (Line 6, Col. 5)		
19	Overtime Penalty Wages (Line 6, Col. 7)		
20	Cost per Cwt. (Line 17, divided by Line 14)		
21	Pounds per Man Hour (Line 14 divided by Line 16)		
22	Average Weight Per Bill (Line 14 divided by Line 15)		

1

WEEKLY SUMMARY
PICKUP AND DELIVERY LABOR, TONNAGE AND STATISTICS

TERMINAL _____ Week ending _____ 19

Line	Account Number	PICKUP AND DELIVERY LABOR	HOURS Total	HOURS Overtime	AMOUNT Total	AMOUNT Overtime Penalty
1	4235	City Drivers and Helpers - Local Equipment				
2	4235	City Drivers and Helpers - Line-Haul Equipment				
3	4235	Line-Haul Drivers and Helpers - Line-Haul Equipment				
4		TOTAL PICKUP AND DELIVERY LABOR				

	PICKUP AND DELIVERY TONNAGE	No. of Stops	No. of Bills	Tonnage
5	City Drivers - Local Equipment			
6	City Drivers - Line-Haul Equipment			
7	Line Haul Drivers - Line Haul Equipment			
8	TOTAL PICKUPS AND DELIVERIES - BY DRIVERS			
9	Castings and Shipper-Consignee Service	*****		
10	Interline Pickups and Deliveries	*****		
11	TOTAL INBOUND AND OUTBOUND (Add Lines 8 to 10)			

	PICKUP AND DELIVERY STATISTICS	This Week	Last Week
12	Number of Bills (Shipments)		
13	Man Hours (Line 4, Col. 4)		
14	Labor Cost (Line 4, Col. 6)		
15	Number of Stops (Line 8, Col. 4)		
16	Overtime Hours (Line 4, Col. 5)		
17	Overtime Penalty Wages (Line 4, Col. 7)		
18	Labor Cost per Cwt. (Line 14 divided by Line 11, Col. 6-7)		
19	Pounds Per Man Hour (Line 11, Col. 6-7 divided by Line 13)		
20	Average Weight Per Bill (Shipment) (Line 11, Col. 6-7 divided by Line 12)		

2

WEEKLY SUMMARY
TERMINAL OFFICE SALARIES, WAGES AND STATISTICS

TERMINAL _____ Week ending _____ 19

Line	Account Number	TERMINAL OFFICE SALARIES AND WAGES	HOURS Total	HOURS Overtime	AMOUNT Total	AMOUNT Overtime Penalty
1	4311	Office Manager				
2	4312	Rating				
3	4312	Billing and Wiseflexing				
4	4312	Collections				
5	4312	Revenue Accounting				
6	4313	O. S. & D. Clerks				
7	4312	Other Office Employees				
8						
9						
10						
11		TOTAL TERMINAL OFFICE LABOR				

	TERMINAL OFFICE STATISTICS	
12	Number of Bills (Shipments) *	
13	Man Hours (Line 11, Col. 4)	
14	Labor Cost (Line 11, Col. 6)	
15	Overtime Hours (Line 11, Col. 5)	
16	Overtime Penalty Wages (Line 11, Col. 7)	
17	Labor Cost per Bill (Shipment) (Line 11, Col. 6 divided by Line 12)	
18	Bills per Man Hour (Line 12 divided by Line 13)	

3

* Inbound and Outbound

Form No. 1, on Platform Labor, Tonnage and Statistics, contains all the essential data concerning platform operations for all size carriers. Most information is available

Form No. 2 covers Pickup and Delivery Labor, Tonnage and Statistics. With the exception of certain refinements, it includes all basic data connected with PU&D operations

Form No. 3 is on Terminal Office Salaries, Wages and statistics. Additional space has been provided for expansion of both the basic data and statistics generally used

Lower Distribution Costs Via Shipper-Carrier Unity

The best transportation service loses much of its value if its users in industry fail to adjust their own operations to make the most of it

By J. C. Emery
President
Emery Air Freight Corp.
New York, N. Y.

TRANSPORTATION is the keystone of distribution. To reduce distribution costs, therefore, we must look first for ways to improve the transportation available to industry. But we also must look for ways in which industry can make better use of the transportation facilities at its command.

The best transportation service loses much of its value if its users in industry fail to adjust their own operations to take full advantage of it. Conversely, even a deficient transportation service can be used fairly effectively by industry if the effort is made. What we are talking about here, though, is the best transportation most wisely used. This is the combination which has brought us to our present high level of production efficiency.

Steady Improvement

Improvement constantly, year after year, has characterized the entire history of the American transportation system. The resourcefulness of the suppliers of transportation equipment, plus the pressures of inter-carrier competition, plus the demands of our expanding economy have been responsible. Yet, it is accurate to say that never before have we witnessed such a concerted drive toward better transportation than we have since the end of World War II.

The reason is practical. The load of freight being transported by the carriers is today at a peak level. But the capacity of the carriers also has increased, and now clearly exceeds even the huge volume of traffic—twice the volume of 1929—which industry offers. This has intensified the competition between carriers and has tended to depress transportation prices, or at least to prevent the increases in rates which would parallel more closely the increases in carrier costs. This is partly confirmed by a significant figure: That transportation's share of the United States sales dollar has declined from 7.5 per cent in 1929 to less than 5.5 per cent currently.

It is the force of circumstance, therefore, that has produced the current decade's all-carrier drive for greater efficiency, which means lower cost to carriers and better service to shippers.

Research is a current factor of great importance in the improvement of transportation service, and a prime example of cooperative carrier research is offered by the Association of American Railroads. The AAR is responsible only for a part of total railroad research activity, and yet its work alone is estimated already to have produced the means of saving a billion dollars a year.

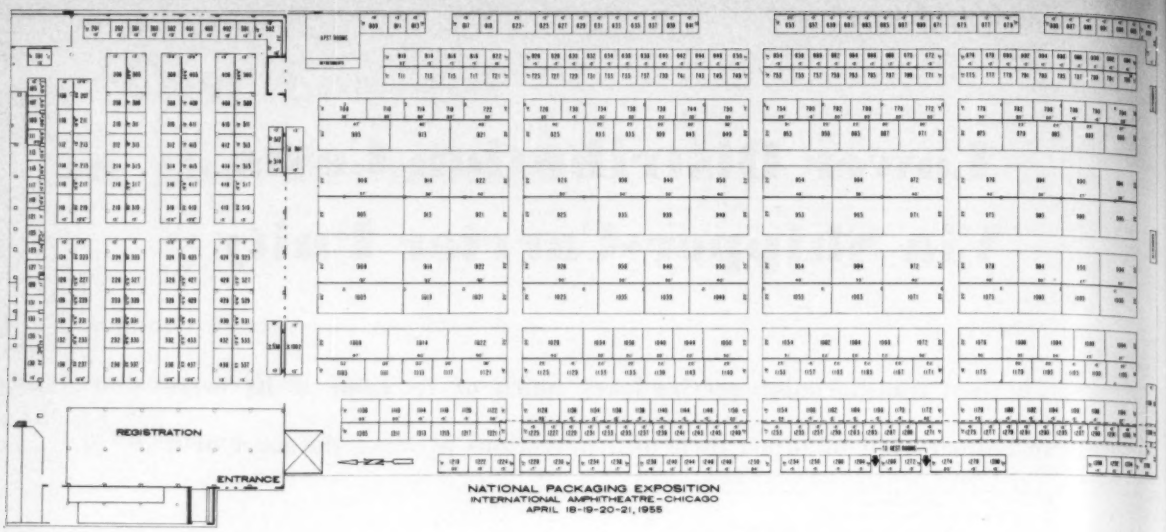
Other carrier groups also are at work on basic research. The American Trucking Associations, through their Terminal Operations Councils, are devising more effective terminal layouts, better terminal operating methods, and improved materials handling systems. Ocean shipping will benfit from the research work of committees set up by the International Cargo Handling Coordination Association.

Better Equipment

Out of research and ingenuity, and in response to clear demands, are coming many new kinds of carrier equipment—equipment designed to do all jobs better or to permit jobs to be done which before have been impossible.

Even more widespread has been the advantageous adoption of mechanized freight handling equipment. Current additions of a

(*Please Turn to Page* 72)



24th Annual Packaging Show

New records predicted in attendance and exhibits as the Windy City welcomes AMA Show and Conference April 18-22

Every aspect of the $10-billion-a-year packaging industry will be explored in Chicago the week of April 18, when the American Management Association holds two major events of the packaging field—the Packaging Exposition and the Packaging Conference.

The conference at the Palmer House is claimed to be the largest and most comprehensive ever staged in the packaging field by the 20,000-member management educational association. At 15 sessions spread over three days more than 40 speakers will report the newest developments in packaging materials, machinery, and methods for almost every major American industry.

More than 380 exhibitors have reserved approximately 140,000 sq ft laid out for the exposition at the International Amphitheatre. As compared to previous years, the 1955 exposition, which will be on display for 32 hours, is expected to put greater emphasis on the packaging of industrial goods.

EXHIBITOR — **BOOTH**

A

A-B-C Packaging Machine Corp....1164, 1166
Abbott Plastic Machine Corp.....665, 667
Acme Steel Co.....1222, 1224
Addressograph-Multigraph Corp.....237
Ajusto Equipment Co.....403
Alemite Div., Stewart-Warner Corp.....433
Algene Marking Equipment Co.....1221
Aluminum Co. of America.....849
Aluminum Foils, Inc.....1080
Ambassador Plastics & Mfg. Corp.....693
American Can Co.....949
American Excelsior Corp.....754
American Marking Corp.....1165
American Partition Co.....1265
American Type Founders, Inc.....1211
Amsco Packaging Machinery, Inc...1013, 1021
Anderson Bros. Mfg. Co.....675
Apex Machine Co.....1185
The Arabol Mfg. Co.....972
Arenco Machine Co., Inc.....610
Armour & Co., Curled Hair Dept.....1227
Arvey Corp.....670,672
The Associated Cooperage Industries of America, Inc.....625
Atlas Plywood Corp.....1072
Automatic Web Control Mfg. Co.....1274
Avery Adhesive Label Corp.....764

B

Bakelite Co., Div. of Union Carbide & Carbon Corp.....926
Bartelt Engineering Co.....994
Battle Creek Packaging Machines, Inc.....766
Charles Beck Machine Corp.....715, 717
Bemis Bro. Bag Co.....1118, 1120
Better Packages, Inc.....536
Biner-Ellison Machinery Co.....853
E. L. Bivans, Inc.....956
The Black-Clawson Co., Inc., Dilts Machine Works Div.....679
Blocksom & Co.....1263
Bostitch, Inc.....864
Bradley Container Corp.....223
W. Braun Co.....505
Brown Bag Filling Machine Co., Inc.....736
The Brown-Bridge Mills, Inc.....1243
B. H. Bunn Co.....646
F. N. Burt Co., Inc.....762
Burt Machine Co.....637, 639

C

C.I.T. Corp.....883
California Wire Products Co., Inc.....1260
Cameron Machine Co.....1195
Cargo Packers, Inc.....1170
Celanese Corp. of America.....922
Celluplastic Corp.....531
The Celon Co.....1114
The Celotex Corp.....211
Celwa Products Co.....509
Central States Paper & Bag Co.....725
Ralph Chaffee & Co.....685
Chain Belt Co.....423
Champlain Co., Inc.....1205
Chase Bag Co.....523
Chase Equipment Corp.....303
The Chaspec Mfg. Co.....1049
Cheslam Corp.....776
Chester Packaging Products Corp.....776
Chippewa Paper Products Co., Inc.....966
Chisholm-Ryder Co. of Pa.....617
The Clark-Aiken Co.....1279, 1281, 1283
Clark Equipment Co., Industrial Truck Division.....214, 216, 218, 315, 317, 319
The Cleveland Container Co.....1133
Clybourn Machine Corp.....1238
E. D. Coddington Mfg. Co.....1246
Arthur Colton Co.....770
Comet Industries.....699
Consolidated Packaging Machinery Corp.....1113
Container Equipment Corp.....801
Continental Can Co., Inc.....1050, 1054
Counsel Machine Co., Inc.....722

(*Please Turn to Page* 108)

In the Russian zone of Berlin a parrot's cage door was accidentally left open and the bird escaped. The owner promptly inserted an advertisement in the local paper, reading: "If anyone finds my parrot, I want it definitely understood that I do not share its political opinions."

—DA—

GIRLS ARE LIKE TYPEWRITERS—THE QUIET ONES ARE THE MOST EXPENSIVE.

—DA—

FILE CLERK: "How do you like your new boy friend?"
TYPIST: "Oh, he's all right, I guess."
FILE CLERK: "What do you mean?"
TYPIST: "Well, I did have to slap him a couple of times last night, but it was only because I thought he was dead."

—DA—

Hy Lifter says: "If Uncle Sam is in poor fiscal shape, it's because he isn't getting enough excise."

—DA—

TACT: THE ABILITY TO CLOSE YOUR MOUTH BEFORE SOMEONE ELSE DOES IT FOR YOU.

—DA—

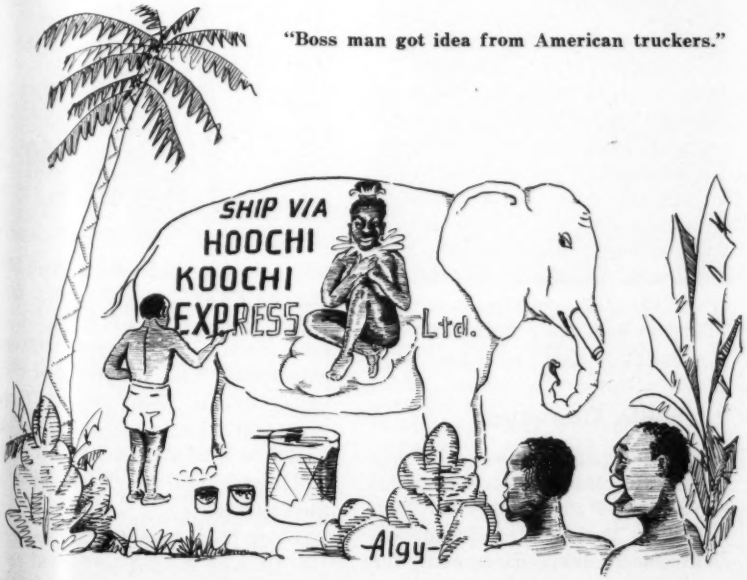
The captain wrote in the ship's log: "First mate was drunk today." After sobering up, the mate pleaded with the captain to strike out the record.
"It was the first time in my life I've been drunk," he pleaded, "and I promise never to do it again."
"In this log we write only the truth," stormed the skipper.
Next day it was the mate's turn to keep the log, and in it he wrote: "Captain was sober today."

"Phooey to the DT's! I'm a man of OS&D's."—Owlix

THERE'S THE ONE ABOUT THE AERONAUTICAL ENGINEER WHO WAS CONFUSED BECAUSE GIRLS WITH THE MOST STREAMLINED FIGURES OFFERED THE MOST RESISTANCE.

—DA—

Ninety-nine per cent of the failures come from people who have the habit of making excuses.



"Boss man got idea from American truckers."

"Aren't you the fellow that sold me a truck a few weeks ago?" inquired the purchasing agent. "I sure am," smiled the salesman. "Well, tell me about it again," said the buyer, "I get so discouraged."

—DA—

WAREHOUSEMAN: "This warehouse has stood for 100 years. Not a stone has been touched, nothing altered, nothing replaced."
CUSTOMER: "Why, they must have the same landlord we have."

—DA—

DAILY TASK OF A TRAFFIC REPRESENTATIVE: TO HELP KEEP THE ENGINES AND CABOOSES FAR APART ON HIS RAILROAD.

—DA—

"Miss Macanalie," said the exasperated editor, "the quotation is, 'All men are created equal.' and not, 'All men are made the same way.'"

—DA—

TM: "We don't get as much government as we pay for."
ASS'T: "That's one of the few things we can be thankful for."

—DA—

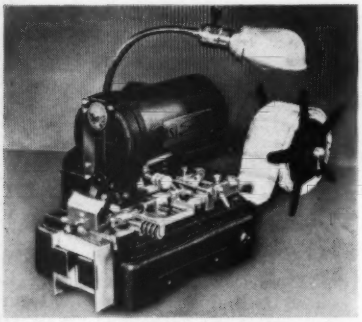
A man may have more courage than a woman, but he doesn't have half the chance to show his backbone.

NEW PRODUCTS *and* EQUIPMENT

Continued from page 51

Label Marker

A new label marker, Model 22, manufactured by **Soabar Co.**, prints all pertinent information on labels ranging in size from 1¼x1¼ in. to 3x1⅞ in. The new

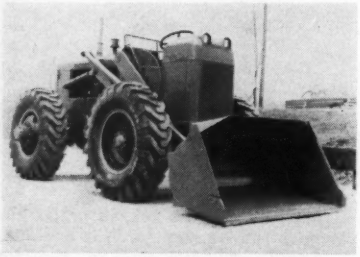


marker is automatic and easy to operate: marks, counts, cuts, and stacks up to 144 roll-fed labels per minute. It has a self-stop counter that stops machine when required number of tickets is printed.

Circle 71 on Card Facing Page 53

12,000-lb Unit

A new 4-wheel drive rubber-tired loader, with a one-cubic-yard bucket, is announced by **Tractomotive Corp.** The new loader, Model TL-12, is equipped with

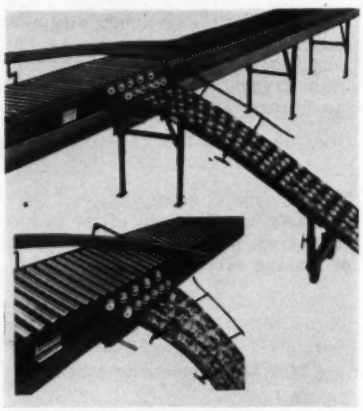


rear wheel power steering, a clutch type transmission with four speeds in each direction, and a torque converter drive with a three to one torque multiplication ratio. The unit has a ground clearance of 15 in., and a 62½-in. tread on both front and rear wheels yet the overall width is only 86 in. Clearance under the bucket cutting edge when it is dumped at maximum raise is 8 ft.

Circle 72 on Card Facing Page 53

Conveyor Unit

The new unit is a movable spur and diverting rail built as a single unit to travel the entire length of a roller conveyor. Manufactured by the **Metzgar Conveyor Co.**, the unit, ball bearing

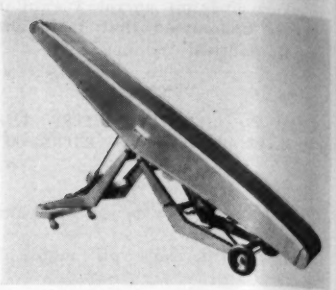


throughout, travels on rails mounted on each side of a roller conveyor, and has its discharge end mounted on caster wheels that run on the floor. It is available in height adjustments to match the live roller conveyor which it serves in standard widths of 11½, 15, 18, and 24 in., with length to suit the requirements.

Circle 73 on Card Facing Page 53

Portable Conveyor

A new, portable power belt conveyor that raises and lowers independently at either end, has been added to the line of **Speedways Conveyors, Inc.** Designed for loading and unloading trucks, railway cars, etc., the unit adjusts from either right or left side to a 30-deg incline, with each sup-



porting leg adjustable independently. The conveyor also can be used for various off-level handling such as bridging from platform to platform or car to car. Adjustment can be made to bring the conveyor surface to as low as 22 in. off the ground.

Circle 74 on Card Facing Page 53

Two-Ton High-Lift

Truck-Man Div., The Knickerbocker Co., announces a new 2-ton high-lift for factory or warehouse. The truck is powered by a 40 brake hp, 4 cylinder, overhead valve, industrial engine. The unit,

which has a rigid tilting mast (10 deg backward and 3-5 deg forward) with 6 in. of free lift, is only 38 in. wide with a 50-in. wheelbase. The truck has a 2-in. inside and a 75-in. outside turning radii. The 4,000-lb rating is based on a 24-in. load center with a 25 per cent overload capacity guaranteed.

Circle 75 on Card Facing Page 53

(Resume Reading on Page 52)

Looking at the Seaway . . .

(Continued from Page 39)

transfer their cargoes to smaller canallers. And salt water ships, which still retain many projections along their sides and may not wish to navigate along the narrow channels up to the Great Lakes, are likely to unload in Montreal.

The city's position as a railway and highway terminus will be enhanced. Montreal has been studying its needs, contemplates expansion of bridges and there is talk of a vehicular tunnel linking both shores of the St. Lawrence.

As a major port, Montreal is handsomely equipped to handle wheat, its principal commodity. But it lags behind other world ports in general cargo handling gear. To bridge this gap, the National Harbors Board currently is at work straightening out some of the worst kinks in the waterfront and streamlining freight handling facilities to meet any substantial inflow of shipping in the future.

At the moment, almost $10 million is being spent on a variety of projects, the largest of which is a major reconstruction of the main shoulder from Section 41 to Laurier Pier. The pier itself will be rebuilt later. By raising the level and building up the shore, an additional 1,000 ft of berthing space will be made available, and handling facilities made more accessible to vessels.

New sheds recently have been completed to provide further warehousing space in an area where it has been sorely lacking. Another shed also has been built at the coastal quays further up, close to Section 35.

New locks at the harbor will enable ships to proceed in and out of the great channel leading through the present Lachine Rapids section into Lake St. Louis. The level of Lake St. Louis is to be increased from elevation 20 to elevation 70. The channel is to run directly from the Montreal harbor to the Beauharnois power canal. There, another set of locks will raise ships from the lake canal for the 14-mile voyage through to Lake St. Francis and on to Cornwall. The Lachine and Soulanges canals will both become obsolete.

Upper St. Lawrence

The face of the Upper St. Lawrence Valley soon will submit to changes and a number of communities on the Canadian side will have to be moved back. A portion of the town of Cornwall, Ontario will be drowned. However, Cornwall expects to benefit from both the navigation and power features of the Seaway and civic officials predict the town's population will jump from 35,000 to 100,000. Nearby Iroquois, to be completely immersed in the new waterway, has ambitions of becoming a new dream city of 40,000 at a new site, based on expectations that 12 new industries will be located there.

Because of modifications in the Cornwall area, the Canadian National Railways mainline between Toronto and Montreal will be re-routed and a new express highway will parallel the railroad. Construction of 80 miles of a four-lane controlled access highway between Brockville, Ontario and the Quebec border will begin shortly at a cost of $30 million. Another $7 million will be spent by the Province of Ontario in relocating 35 miles of No. 2 highway, a decision made necessary because the present highway will be used as a service road during work on the Seaway.

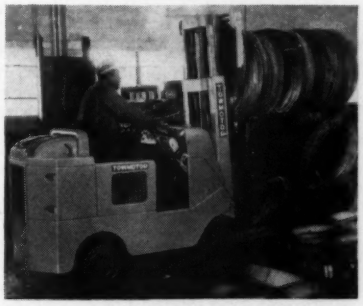
The new highway will end at Lancaster, about 10 miles west of the Quebec border. It will be another link in the trans-provincial expressway from Windsor, Ontario to Quebec.

With the availability of more power, Southern Ontario anticipates the addition of a million new inhabitants in the near future. Canada's No. 2 city, Toronto, also regards the Seaway as a great blessing. Toronto reasons that it is in the best position of any Lake center to make the grade as a deep sea port when the Seaway comes in. To this end, plans call for doubling the freight handling capacity of Toronto's harbor, and considerable dredging is to be undertaken. Two miles of lake east of Eastern Gap are to be reclaimed to make room for new docks.

Torontonians predict that cargoes of raw sugar, crude gypsum, molasses, phosphates, fish and kerosene, now unloading at Montreal piers, will move non-stop to Toronto wharves. At Toronto's docks, ships will pick up grain, motor vehicles, farm machines, canned meat and aluminum. Ontario-made automobiles are expected to become more competitive in world markets. Cheaper coal, cheaper homes and a big business boom is forecast by Toronto citizens.

Toronto's major competition is expected to come from Hamilton, Windsor, Fort William and Port Arthur and to a lesser extent from such points as Amherstburg, Cobourg, Cornwall, Kingston, Midland, Port Colbourne, Port McNicoll, Prescott, St. Catherines, Sarnia, Sault Ste. Marie and Thorold.

50 Per Cent Saving



Time required to handle coils of wire has been cut markedly by The Spencer Wire Corp., Union, N. J., with special ram-equipped fork trucks. Formerly, two older trucks unloaded trailers of wire coils in ¾ of an hour, with one operator and helper each; a fast job compared to other handling methods. Now, the company claims that the new ram-equipped trucks with operators, can do the same unloading job in 50 per cent less time, releasing two men for work in other departments

Laprairie Basin Canal

Noted as a "by-product of the Seaway" once the latter is completed, is the much-discussed possibility of the cutting of a channel from the Laprairie Basin south of Montreal to connect with the Richelieu canal, thus providing a new waterway between Montreal and New York. This would involve the deepening of the Richelieu River from Lake Champlain to St. Johns, Quebec, and the construction of a 15-mile canal from St. Johns to the Lapraririe Basin across from the port of Montreal. Principal Canadian sponsor of this project is the Chamber of Commerce of the Richelieu-Lake Champlain Region.

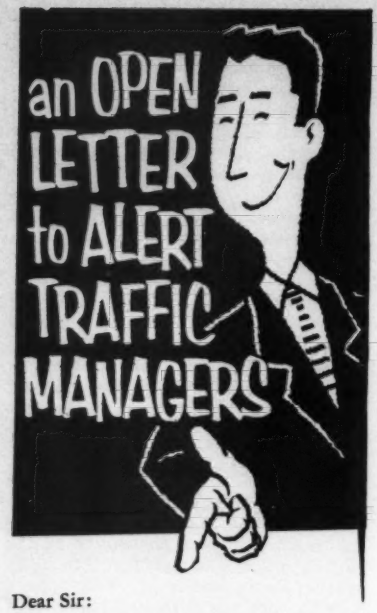
Understandably anxious about future Seaway shipping are Canadian shipowners. Generally speaking, they are not opposed to foreign ships entering the lakes but they do not want them trading between lake ports. When the Seaway comes in, there will be a big international trade movement between Quebec ports in Canada and Lake Erie ports in the U.S.A. just as there is at present between Duluth, Sault Ste. Marie and Hamilton.

At the present time, Canadian and U. S.-owned Lakers control the latter trade since large foreign-owned ships can not get up the St. Lawrence system to participate because of the physical limitations of the canals on the St. Lawrence River.

In a recent address, T. R. McLagan, president of Canada Steamship Lines Ltd., dealt with this problem in the following manner: "A proposal is being made by our American friends to control this interior seaway which we are about to build. It is suggested that Canada and the U. S. A. make a treaty restricting this trade between our two countries to American and Canadian built and registered ships.

"I commend this suggestion to you and I hope our rulers at Ottawa will take heed before harm is done to our water transport services. The treaty suggested is not intended to bar foreign ships from carrying goods to and from foreign ports and ports on the Great Lakes." •

(Resume Reading on Page 40)



Dear Sir:

Make San Francisco your West Coast Storage Headquarters. Why? Because San Francisco is the geographical center of the Pacific Coast! And, of course, San Francisco's climate and humidity are ideal for storage.

And, as you know, the finest warehousing and distribution facilities are found at San Francisco Warehouse Company.

Here's why:

- *50 years as Pacemaker of Pacific Coast Warehouses*
- *Over 500,000 square feet storage area*
- *Sprinklered or Electric Fire Detectors*
- *ADT Supervised*
- *General Merchandise, U.S. Customs and Internal Revenue Bonded Storage*
- *Office accommodations and Telephone Service*
- *Pool Car Distribution*
- *Permitted City Carrier*
- *Bonded Draymen*
- *Private RR Sidings*
- *Reciprocal Switching*

Sincerely,

San Francisco Warehouse Co.

SAN FRANCISCO WAREHOUSE CO.

MAIN OFFICE:
605 Third Street, San Francisco 7, California
Telephone SUtter 1-3461

NEW YORK REPRESENTATIVE:
Distribution Service, Inc., 2 Broadway
Telephone: Bowling Green 9-0986

CHICAGO REPRESENTATIVE:
Distribution Service, Inc., 251 East Grand Ave.
Telephone: Superior 7-7180

Distribution Employes . . .

(Continued from Page 33)

partly because of the small size of many distributive businesses. Another factor is that the management groups in these companies are typically small and have a wide variety of other responsibilities as compared to the more specialized management organizations of larger industrial, financial and utility companies.

The entire non-executive group is covered by 44 per cent of the retirement pension plans and 74 per cent of the formal sick leave plans described in the survey. Other benefits range in between these figures. Coverage of at least three-quarters of the non-executive employes occurs in 64 per cent of retirement plans and 88 per cent of formal sick leave plans, with the other benefit percentages falling in between.

Wide variation is found in financing arrangements for the different employes benefits. Sick leave and retirement pension plans are most often financed entirely by contributions of distributive employers. On the other hand, in many hospitalization and surgical plans, employes alone pay the entire cost. Most benefits, however, are financed jointly by employer and employe contributions. This is especially true of life insurance and prepaid medical care. It also applies to hospitalization and surgical care, but to a lesser degree.

Data was obtained in the survey on the date of adoption of major employe benefit plans. The historical picture shows that life insurance is the longest established feature but that the strongest emphasis today is in the field of retirement pensions. Over half of the life insurance programs have been in operation since 1940, and only one-sixth of them have been put into operation since 1950. Of the retirement pension programs, only 11 per cent were established as early as 1940 and nearly one-quarter of them were put into operation during the last three years.

A highly significant result of this inquiry was the reporting by numerous companies that they are either considering or have already installed profit-sharing plans with the attendant funding involved.•

(Resume Reading on Page 34)

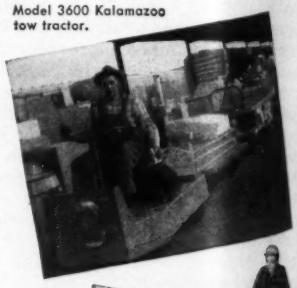
Let WISCONSIN HEAVY-DUTY ENGINE POWER Carry the Load . . .

Whether handling bulk or packaged materials . . . on the loading dock, in the yard, plant or warehouse . . . you can depend on Wisconsin Heavy-Duty Air-Cooled Engines to carry the load with economy and efficiency.

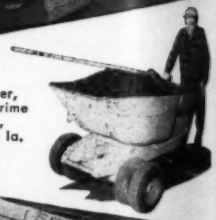
When you specify "Wisconsin Power" for your material handling equipment, you are assured of dependable, heavy-duty "lugging power" that stays with the job. Carefully engineered heavy-duty design and construction and such features as tapered roller bearings at BOTH ends of the crankshaft, rotary type high tension OUTSIDE magneto with Impulse Coupling for easy starting in any weather at low cranking speeds, PLUS all-weather AIR-COOLING . . . these are some of the factors that contribute to stay-on-the-job dependability and long engine life.

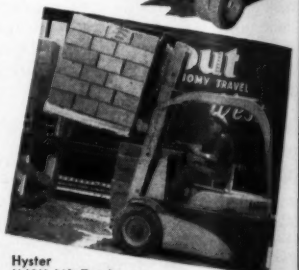
Let Wisconsin Engines *carry the load* on *your* material handling equipment. A full range of sizes from 3 to 36 hp. provides the most complete power selectivity to fit both the *machine* and the *job*. Write for Bulletin S-164.

Model 3600 Kalamazoo tow tractor.

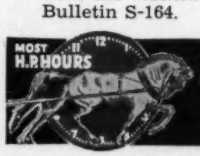


Prime Mover, made by Prime Mover Co., Muscatine, Ia.





Hyster "40" Lift Truck.



WISCONSIN MOTOR CORPORATION
World's Largest Builders of Heavy-Duty Air-Cooled Engines
MILWAUKEE 46, WISCONSIN

Circle No. 15 on Card, Facing Page 53, for more information

. . . in a Sack

(Continued from Page 43)

board cartons of tropical fish from an airplane to a cargo shed on a cold winter day. The pusher broke down, and the crew had to walk a mile to the shed for a replacement truck.

By the time the crew returned and got the shipment under shelter, most of the tropicals in the tins had been destroyed by the cold. The carton-packaged fish were in good condition.

Even if packages are pitched upside down by turbulence in the air, airlines report there is little chance for loss or injury to fish. Sunlan's operators estimate they have not had a dozen complaints about loss or injury to fish from consignees since they started using cardboard containers.

Rough, hard surfaces of cans, it is explained rubbed bruises on fish, and a fungus condition would develop. If a trip were to last more than 24 hours, airline attendants had to remove can lids. This resulted in loss of water, and the probability that valuable specimens either would leap out or be splashed onto the floor of the plane.

Air spaces between units of cartons help cushion the shock, as well as provide aeration. This is an extremely important factor when it is remembered some tropical fish are so delicate they can lose their color at the least fright, and that many specimens are so valuable one package may contain fish worth thousands of dollars.

Airlines report the flatter packages ride more securely, stack better in the plane and make it easier for handlers to get the right sides up. Although the package may cost more per unit than some, Sunland considers the extra expenditure well worth while in getting valuable fish and fragile aquatic plants great distances without loss.

As tropical fish specialists, the firm naturally disdained handling goldfish. But the new package has proved it can be done economically.

The next step will be to take packages directly to the goldfish producers and pack consignments there by Sunlan methods. The owners are confident they can fly these fish thus packed to Miami and then transship them to customers to the south at a saving of greater than 50 per cent.

As a result of recent contracts, Sunlan plans scheduled delivery service in their own fleet of trucks along points between Miami and New York.

This service, if it can be developed, merely would augment air shipments and tend to increase the amount of business presently contracted with the airlines.

Sunlan is making test runs on its personal trucking service, and if they prove practicable, entirely new markets will be developed for the benefit of all. •

(Resume Reading on Page 44)

HERE'S WHAT TO LOOK FOR

when you're buying a hand pallet truck

MODEL L2P
Capacity 2,000 lbs.

WELDED IN ONE PIECE... head, shoulders and forks. No weak spots.

POLISHED PUMP PISTON plus 7 packings to insure permanent oil seal.

3 GRADUATED BOOSTER ROLLS to provide easy pallet entry.

POLISHED ELEVATING RAM and long-lived packings to prevent oil leakage.

HEAVY DUTY SPRING to hold handle in upright position.

SMOOTH BRAKE PAD to prevent damage to floors.

RUBBER-TIRED FRONT WHEELS... Bigger, wider . . . for easy rolling and floor protection.

RAYMOND

Lightweight **HAND PALLET TRUCK**

. . . has all these . . . and more. Lightweight . . . thanks to aluminum alloy construction. Rugged, yet easy to pull. Foot pedals lift and lower your load.

CLIP & MAIL COUPON!

The RAYMOND CORPORATION
13954 Madison St., Greene, N.Y.

☐ Send catalog, showing Hydraulic Hand Trucks.
☐ Please have your representative call.

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ STATE _____

Circle No. 16 on Card, Facing Page 53, for more information

The Integration of . . .

(Continued from Page 40)

the wages and operating costs of the men and machines who unload and store incoming supplies; the wages and operating costs of men and machines who move supplies to and from storage, process or shipping.

For a long time, the crucial cost factors in most industries were those relating to the actual manufacturing and production techniques. Major savings were obtained by the substitution of tools for hand skills, power tools for hand tools, a continuous process for a batch process, automatic control, and mass producing equipment for single-unit producing equipment.

During this period of measurement and modification cost-cutting, movement was relatively ignored. That's not to say that no advances were made in the techniques of materials handling and distribution. On the contrary, industrial trucks, conveyors, cranes, chutes, tramrails, slings, belts, buckets in a bewildering array of models, shapes, capacities and design were developed and applied.

Until World War II, little attention was paid to materials handling and movement. Yet, essentially, all the technical know-how, all the engineering it takes to design and produce today's materials handling and distribution equipment, was known during the 30's—and even in the 20's. As recent as 15 years ago, the annual sales volume of the materials handling industry was less than $50 million. It's now said to be in excess of $1 billion.

The reason for this phenomenal jump doesn't lie in a radical change in our production methods, but in the greatly increased cost per foot-pound of energy expended in movement.

At first, modernization of movement was a hit-and-miss proposition. When situations arose where savings from the substitution of a machine for manpower, or the substitution of one machine for another, were so obvious as to hit management in the face—management approved.

Three Prime Movers

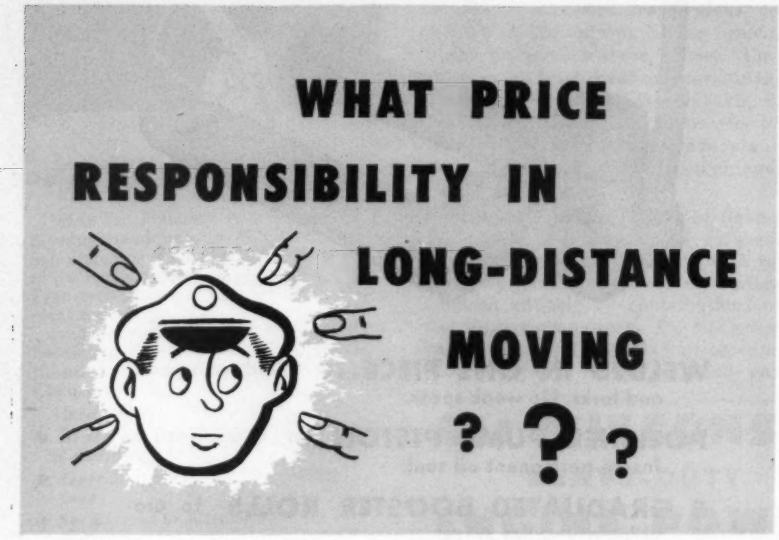
Managements, of course, were not altogether as blind as I may have made them sound. After all, savings, at one time, could be made faster and easier by modernizing production and manufacturing techniques. But three basic situations finally arose that changed the picture and resulted in the present vast materials handling industry.

First of all, measurement and modification techniques reached a plateau. Production know-how was more than adequate to turn out both the necessities and luxuries of modern life. Secondly, the war years demanded a revolutionary increase in the rate and speed of movement. Thirdly, and perhaps most important, labor costs shot sky-high.

If we take a company where 30 cents out of every cost dollar represents labor cost, only 1/3, or 10 cents, is apt to represent production labor—measurement and modification labor. The other 20 cents is, in the main, labor expended on movement. This is not an untypical ratio.

It seems to me we can assume that many, if not most, manufacturing companies can get a greater return for every dollar of capital investment by improving movement than by improving measurement and modification combined. On the basis of the ratio I've just cited, a 10 per cent reduction in the cost of movement will be the equivalent of a 20 per cent reduction in the cost of modification and measurement.

And although I haven't made detailed comparisons, my own experience tells me I'm on safe ground when



▶ Responsibility, of course, is a "must" in a Long-Distance Mover. It is not, however, a virtue for which you must pay a premium. Mayflower Service costs no more, yet Mayflower assumes *complete* and undivided responsibility for every move . . . has proved itself a reliable and financially responsible company for over 25 years! In addition . . . when you schedule moves the Mayflower way, you—and the people you are moving—*know* you are getting the very best. Highly-trained personnel . . . a nationwide organization dedicated to service . . . the world's largest owner of moving equipment, await your call. Rely upon Mayflower . . . It's America's Finest!

AERO MAYFLOWER TRANSIT COMPANY, INC. • INDIANAPOLIS, IND.

Mayflower's organization of selected warehouse agents provides on-the-spot representation at the most points in the United States and Canada. To locate your local Mayflower agent look in the classified section of your telephone directory under "Moving," or call Western Union by number and ask for Operator 25.

AERO Mayflower
America's Finest

NATION-WIDE FURNITURE MOVERS

I say that in the average plant the capital cost of effecting a 10 per cent cost reduction in materials handling —or movement—would be considerably smaller than that needed to cut production costs by 20 per cent.

In fact, I may go even further to say that whereas there exists a real possibility in many companies to reduce movement costs 10 per cent, it would be difficult indeed to find modern plants where a 20 per cent reduction in production costs would be realized regardless of a management's willingness or capacity to spend capital funds.

Planning and Operation

Although the technique of movement planning and operation is in its infancy, full advantage should at least be taken of the equipment and know-how already available. In the years between now and 1960, my theoretical target date, I doubt if there will be any radical changes in the field of movement. Rather, we'll probably see the general level of movement know-how rise to that of the most advanced company today.

To add to the discussion of materials handling in 1960, I must again return to the word integration. In the future, management will look upon movement as equal in importance to measurement and modification. Rather than as a series of isolated handling problems, management will visualize the totality of movements.

Management presently is accustomed to measuring and analyzing a company's operations in terms of sales, finance, engineering and production, to mention a few. In the future, they may also use the dimension of movement for analysis. All managements may some day chart the progress of the monetary equivalent of the foot-pounds of energy expended per unit of product.

Perhaps we may see the rise of a new executive position—that of manager of movement. Upon him may rest the final responsibility of controlling the power, both from man and machine, expended on movement. Under him he may have a supervisor of internal movement, known today as the materials handling engineer, and the supervisor of external movement, known today as the traffic manager.

The movement manager and his team will coordinate their activities with the product design group, the production group, the packaging group and with their dealer and distributor organizations. In this way, all movement, from the shipment of raw materials, through manufacturing and finishing operations to shipment out of the plant and delivery to the ultimate consumer, will be considered as a whole.•

(Resume Reading on Page 41)

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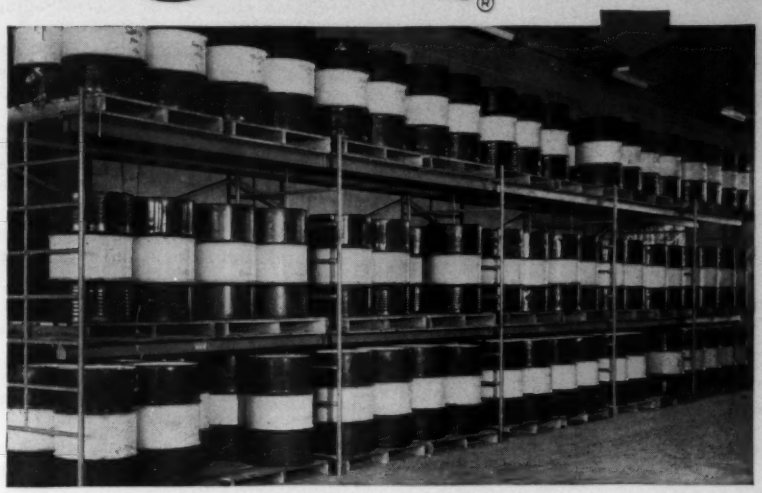

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. . . Material Movement

(Continued from Page 41)

requirements of the environment in which the business is situated. Secondly, to come to an understanding of the resources available to that business and attempt therefrom to develop logical hypotheses of how the resources can be best organized to meet the requirements.

To be specific, if a traffic manager, for example, were to become increasingly curious about shipping requirements in respect to:

1. The frequency and composition of shipments to particular destinations;

2. The size of shipments;

3. The relation of these elements to actual orders on hand;

4. The relation of manufacturing schedules for particular products to shipping schedules;

5. The availability of stocks both at the factory and in local distributing points on the frequency, composition and size of shipments;

6. The relative costs of shipping that would result from utilizing this information into ideal shipping routines—he would quickly be involved on a sound factual basis with the manager of the manufacturing facility in respect to the inter-relation of schedules and the marketing manager on stocks, shipping commitments, etc.

There would be involved as a result investigation of the balancing of transport costs against other costs and an effort to determine overall economies, not economics in isolated elements alone.

Understand this does not necessarily mean that in many cases the isolated approach will not still represent the best results that can be attained at a given time.

It does mean that a serious look will be taken at the entire process and for modification that can be made across the whole for the benefit of the whole. The area of investigation will not be limited to each segment of the business or process as a thing independent of the other elements.

In effect, integration will have been obtained at the intellectual level, if not at the mechanical level. Strangely enough, the intellectual integration is the most important as it must come before any mechanical integration if possible.

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examples without writing a text book because the problems in the end can be quite massive. In their essence, all of these problems consist of two things:

1. Finding out what the pattern of requirements actually is on a systematic basis;

2. Balance individual cost or combinations of costs that will provide a means of meeting the requirements against resultant total risks—in simplest terms risk of lost business.

The job for transport people is to see that external transport receives fair consideration in these problems. If external transport looms insignificantly in any combination, well and good, adapt to the system that results in maximum overall good. If external transport looms large, then how it is done should be a government factor.

Because these problems can get large, my examples cannot be total ones, only partial descriptions.

The study of frequency and magnitude of demand has bearing upon a number of other transport considerations including:

1. Should products having widely differing demands be shipped in the same manner;

2. Should items having fairly constant demand of high frequency, but relatively low volume receive special treatment or be handled in the same manner as items with higher magnitude and less frequency, and so on.

Although these examples have given the situation only a once-over lightly, I hope that they illustrate several things:

1. That the problem of external transport is an essential part of the basic process just as is internal transport or fabricating;

2. That there are involved in such problems highly sophisticated measures of performance such as demands, which I illustrated, relation of costs to volume, etc., each of which on its own is subject to careful investigation before conclusions are reached;

3. That factors entering into the transport problem reach beyond transport itself into other business functions;

4. That the solution of these problems for maximum results must reach beyond the tools usually considered as useful to the transport executive;

5. That these problems are a curious combination of sophisticated methods and the statement of business objectives and assumptions—not just one but both.•

Editor's Note: Mr. Rockwell's and Mr. Hurni's remarks are excerpted from an address before a recent Working Conference at the Drake Hotel, in Chicago. The conference was sponsored jointly by the Material Handling Institute, the Chicago Association of Commerce and Industry, and the Traffic Club of Chicago.

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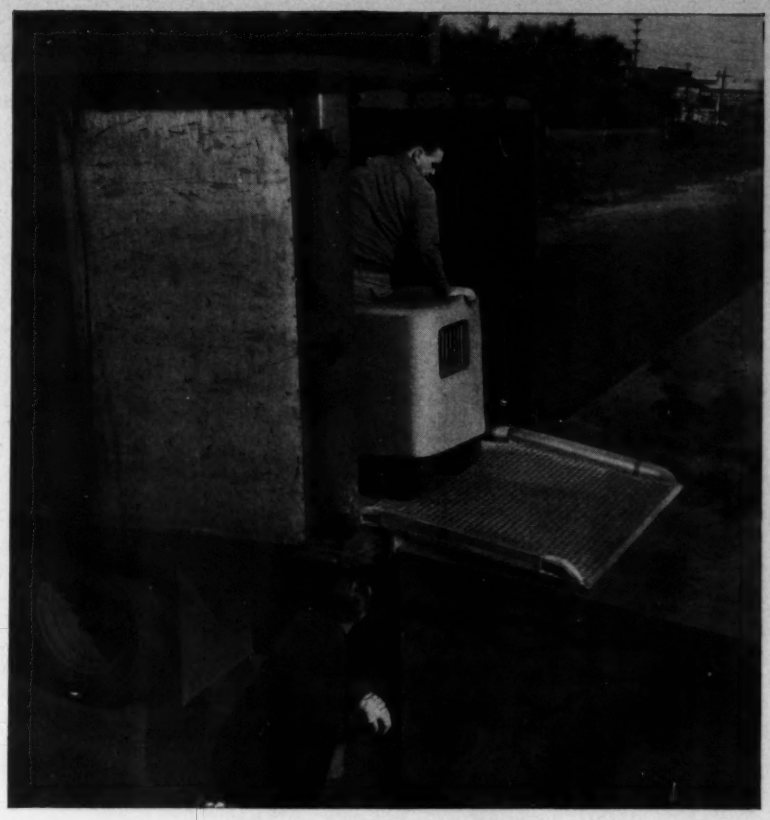

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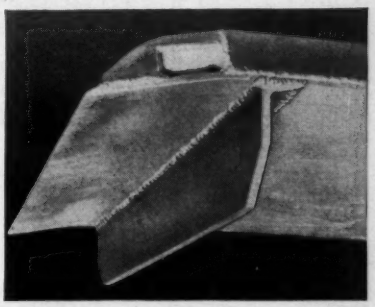

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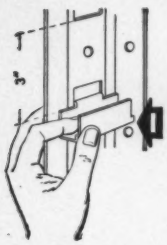

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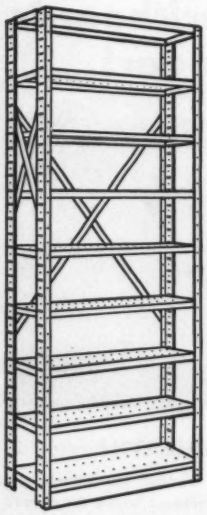

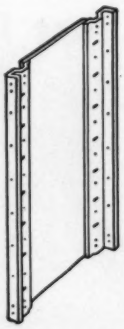

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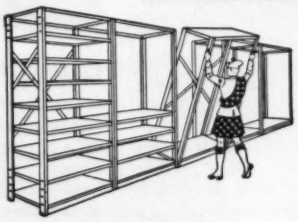

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Washington DA

(Continued from Page 27)

Maritime Board. He now is the Under Secretary of Commerce for Transportation, in which post he succeeds Robert B. Murray. Mr. Rothschild also will serve as vice chairman of the high-level Defense Transportation and Storage Committee.

AUTHORITY IS STUDIED—Its own authority to regulate oil truck movements inside the borders of a state is being probed by ICC. The agency intends to define its jurisdiction over common carrier and contract trucks hauling oil and oil products previously moved by other kinds of transportation from an out-of-state point. A number of transporters have brought up the question of jurisdiction of the ICC in such instances.

PUSH CHANNEL PROJECT—In full swing is the drive to have the federal government pay full costs of deepening the Delaware River from Philadelphia to Trenton. A 40-ft channel, eastern congressmen and state officials insist, would be of value to shipping and attract new industry to the Delaware Valley. The White House position so far is that local interests should chip in $18 million to help pay the $91.3 million bill.

(Resume Reading on Page 33)

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. . . Challenge

(Continued from Page 37)

and the weight of the ore is recorded.

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The boom may be raised and lowered through an arc suitable for loading small ships at low water or the largest carriers at high water level.

Trucks on standard-gage tracks and the traversing mechanism are similar to those used for the ore bridges. They are powered by direct current to provide a top speed of 200 fpm for movement hatch to hatch.

Steel cord belts are used in the reclaiming system because they provide minimum stretch, compared with ordinary belting fabrics. This is especially true with a direct current hook-up, when two long and heavily loaded systems are started simultaneously. Here, speed at the foot end of the leading belt is less than belt speed over the head pulley of the preceding conveyor.

Shipping Dock

The ore dock which was prefabricated in Orange, Texas, and floated to Venezuela, was built in three sections and welded together. The dock is 82 ft wide, 15 ft deep and 1,128 ft long. A single, 376-ft section weighs 2,250 tons.

En route to Puerto Ordaz, dock sections, with watertight bulkheads, floated as barges. On reaching final destination and being positioned, each section was raised on six-foot diameter steel pipes or caissons 100 ft long; twenty-six of which were dropped through wells on each side of a section. Caissons were driven 10 ft below the river's sand bottom and seated on rock, by the use of a steam pile driver, handled by a 100-ton crawler crane. Dock sections were air-jack lifted on the caissons to final elevation (about 40 ft), and above the river's flood stage.

The Orinoco Mining Co. plans to take ore out of Cerro Bolivar for at least another 100 years, while making it available to countries throughout the world.●

(Resume Reading on Page 38)

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. . . Shipper-Carrier Unity

(Continued from Page 57)

wide variety of devices are converting freight handling from a manual to a machine operation.

The savings to the carriers which have been derived from materials handling equipment are remarkable. On railroad docks in Baltimore, 10 fork trucks have reduced handling costs from $1.26 to less than 90c per ton. In another instance, similar equipment intelligently used has increased work output per man hour by 75 per cent.

The carriers are not working alone to improve the value of their service to industry. Few indeed are the improvements which have not been directly inspired by the suggestions or the experience-demonstrated needs of shippers. The regional shippers advisory boards are a powerful factor in this direction. For just one example, their clean car committees are making excellent headway in helping to reduce the annual 200 million dollar car cleaning bill.

A speaker at the American Management Association meeting in New York last October referred to the high cost f unnecessary delay in loading and unloading trucks and trailers. It costs a truck owner $6 to $9 an hour to have a truck and driver tied up at a shipper's dock. By cooperative effort between motor carriers and shippers, this problem is being solved. With mechanized equipment and proper scheduling, waiting time at one New York warehouse has been cut in half; the number of warehousemen required has been reduced from 30 to 18; damage has been reduced; and better utilization of platform space has resulted.

Inter-Carrier Integration

Shipper-carrier cooperation is matched, in its importance to the solution of distribution difficulties, by inter-carrier integration. Coordination of all the different types of transportation has long been recognized as the key to the best in service to shippers. Coordination is not easy for competing carriers, for a variety of obvious reasons, so that in the past it has had to rely on the initiative, ingenuity and routing freedom of shippers themselves. But now, effective coordination is being devised by the railroads, motor carriers, waterway operators and air carriers.

My reason for neglecting air freight is that, as yet, in the overall transportation picture, air freight is pretty small potatoes. And yet, I believe that air freight holds great promise as a factor in reducing ultimately high distribution costs.

Industry has granted an extraordinary acceptance to each new increase in the speed of freight carrying. This is significant in considering the business implications of air freight since, with its advent, the speed of transportation available to shippers has had unprecedented acceleration. It required over a hundred years to produce eight-day surface freight service from coast to coast. Now, in its brief history, air freight has bettered that performance standard by nearly 90 per cent.

This simple premise, that air freight offers a new speed standard and that business puts a controlling high value on freight speed, is the basis for predicting a large growth and usefulness for air freight.

I have tried to outline some of the more significant developments in the general field of domestic transportation. It remains to interpret these developments as they bear on reduced distribution costs for industry.

Any measure which will reduce carrier operating expenses is important to shippers as well as to carriers. Every operating economy which the carriers can devise tends to permit reduced transportation rates—or at

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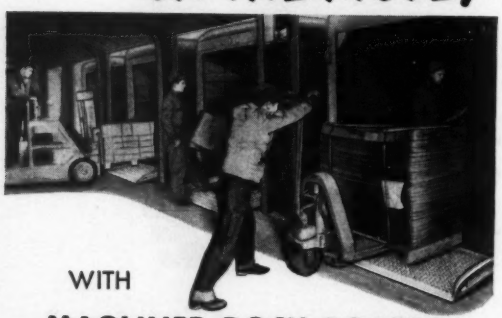

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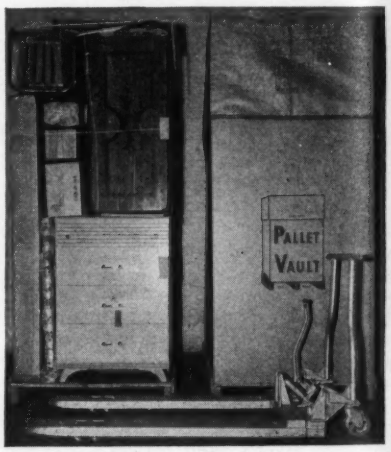

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least to forestall or minimize the rate increases which otherwise must accompany such increases in carrier expenses as result from ever-higher employe wages.

But, to me, the most significant trend in transportation is the apparent recognition by the carriers, and action in response to that recognition, that the most valuable transportation service is one which is not only fast but highly dependable. Predictable scheduling as well as fast scheduling is the order of the day, and this is highly significant to all shippers.

In industrial production and distribution, high rents, high labor costs and rapid technological advances which produce repeated changes in design, are making it difficult and costly to rely upon extensive stockpiling and warehousing during the manufacturing stage or in the selling phase. The trend clearly is toward an almost uninterrupted flow from raw material to finished product to final sale and delivery, with a minimum of picking up and setting down en route.

Pin-Point Scheduling

Obviously, this technique demands a special kind of transportation service—not one which will move freight on a tramp steamer, when-as-and-if basis, but one which offers fast schedules rigidly maintained. A scheduled freight service, whether by rail, highway, water or air, is the only freight service of real value to shippers.

Of course, a fast and predictable carrier service, while potentially very useful indeed, will have actual value to industry only to the degree that shippers themselves capitalize on it to their advantage. The carrier can only offer the service which seems to be what the shipper needs.

It is the shipper himself who must put his imagination to work, look at his operation as if he were starting it from scratch, and consider how he might rearrange his facilities and personnel on the foundation of the better transportation now available.

It takes hard thinking and courage to change a long-established system of procurement, production and distribution.

If we have imagination and courage and if we work together, we can indeed reduce the high cost of distribution. Further changes in carrier services may be necessary, just as changes in industrial practices probably are required. These changes do not come easily.

I am sure I can speak for all carriers when I say that we are eager to help work out the improvements in our distributional techniques and to provide the fast, predictable transportation service on which they will be based.•

(Resume Reading on Page 58)

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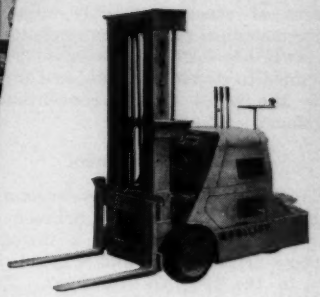

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Stacker Nomenclature . . .

(Continued from Page 47)

The original stacker fitted nicely into the scheme of things when the skid-platform method of handling was introduced. The stacker's base fitted well under the high legs of a skid. It soon became commonplace to stack skid bins one on top of the other, with or without racks. This became the first application of multiple tiering.

With the advent of the pallet-fork truck method of handling, manufacturers of stackers quickly adapted their machines to the new technique. Bases in the form of outriggers were designed to straddle pallets, and forks took the place of the conventional platform.

Walkie Development

In 1936 another revolutionary change took place. I. F. Schreck of the Moto-Truc Co., added a storage-battery driven motor and a hydraulic lift to the low-lift skid jack. The "walkie" type of skid truck was born.

During World War II the Navy wanted a high-lift pallet truck which would operate within very narrow aisles. Schreck took a stacker, made it self propelling and produced the first "walkie" which could transport and elevate loads under its own power. One of the most significant advances in stacker design had been achieved. These machines had been freed from their dependency upon power-line current. They now were able to operate at any point where there was a proper running surface.

With all these design changes, the problem of nomenclature became serious. In addition to the host of trade names, such terms as pallet stacker, straddle truck, powered stacker, portable elevator, lift, hoist, tiering machine, and just plane stacker were used to describe the machines.

The next step involved development of the so called rider type. This compounded confusion, since it brought into being a "rider-type walkie."

Finally, still another type truck appeared, a cross between a counterbalanced fork truck and a stacker. This was created by removing the outriggers and lengthening the frame, so that the batteries and frame counterbalance the elevated load.

Although the counterbalanced stacker probably does not represent final development in this field, the old original stacker has by no means been relegated to antiquity. The stacker still fills an important role in materials handling. The newer machines simply have extended the stacker principle into wider applications.

The Stackers Role

The manually propelled and hand or power operated stackers are used in situations where the installation of more elaborate equipment would not be justified. It is unlikely that the stacker ever will be replaced in limited area operations, in narrow aisle operations, or where tiering is done only on a limited basis.

In warehouses, stockrooms, plant maintenance work, and similar situations the low investment and maintenance costs of stackers make them a natural.

Stackers handle a wide variety of products, either in the form of unit loads on skids or pallets or as individual items. The latter include barrels, drums, bales and bags, and boxes, cartoned or crated materials, and long objects in the form of rolls, such as paper, rugs, etc. There also are special-purpose stackers. Stackers also have been used for floor-to-floor elevator service.

Within recent years several light, mobile units have been introduced

New DRY TAMP PERMA Mix Floor Patch

Don't stop traffic to repair floors—use Permamix, the new all-temperature DRY TAMP floor patch.

DRY TAMP MEANS SPEED • No sticky mass to dig out of the drum or to handle • Permamix dry pours • sets instantly • feather edges perfectly • no production delays • non-skid surface.

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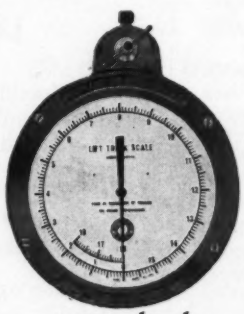
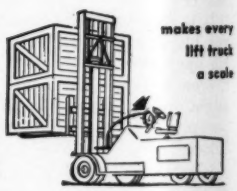


Weigh it as you Lift it



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FITS ANY HYDRAULIC-CYLINDER-TYPE FORK-LIFT TRUCK

This inexpensive device shows the driver the exact weight picked up, thus assuring a full load with safety. It can be used to totalize loads and check records of stock and inter-plant storage. Permits floor weight distribution. Prevents elevator overloads. Safeguards equipment and life.

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MARTIN-DECKER CORP.

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which provide power for elevation from automotive-type storage batteries. These machines are not self-propelled, but the fact that they are not dependent upon line current means that they can be used for such light-duty jobs as elevating loads to the tail gates of trucks.

Complete Powerization

Complete powerization of the stacker simply has widened the range of action for this basic machine, and made it possible for the operator to ride when the distances involved are longer than are practical for a manually propelled unit.

It is obvious then, that the confusion in nomenclature has not made the stacker any less effective as an efficient tool in the science of materials handling. By eliminating the confusion, however, the process of selection and application will become infinitely simpler.

Standardization

The following outline is offered as an initial step in the direction of standardized nomenclature.

STACKERS. The basic type of portable elevator used for tiering materials. Not self-propelled, they are broken into two sub-types:

1. **Hand Stackers.** Stacker with manually elevated carriages.
2. **Electric Stackers.** Stackers with electrically operated carriages. The source of power is either line current or storage battery.

Should further refinement be necessary, the kind of load for which the stacker is intended can be designated by such words as barrel, skid, or pallet. Thus we would have an electric power stacker, or perhaps a hand barrel stacker.

POWERED STACKERS. All of the true stackers which are fully powered, including traction and elevation. They also are broken into two sub-types:

1. **Non-Ride Powered Stackers.** Stackers which are operator-led.
2. **Ride Powered Stackers.** Stackers on which the operator rides, either in a standing or sitting position.

POWERED COUNTERBALANCED STACKERS. Trucks which are built along stacker lines, but which have no supporting outriggers and are, therefore, counterbalanced by the frame and storage battery. They also are broken into two sub-types:

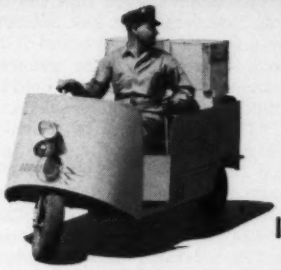
1. **Non-Ride Powered Counterbalanced Stackers.**
2. **Ride Powered Counterbalanced Stackers.**

Up to the present these machines are all used for handling unit loads on pallets, and usually are equipped with tilting masts. •

(Resume Reading on Page 48)

Curtain Raises on Chilton Expansion Program

The Chilton Company, publishers of national magazines including Distribution Age, recently announced the start of construction calling for the addition of two floors, totaling 44,800 sq ft, to its present plant, offices and executive headquarters in Philadelphia. Chilton maintains offices for its publications in 10 principal cities throughout the country



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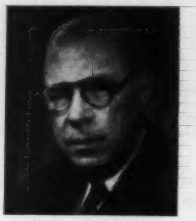
Within the LAW



By Leo T. Parker Legal Consultant, Distribution Age

DISTRIBUTION & MERCHANDISING

If there is no legal representation there is no valid or enforceable contract.

It is important to know that legal representation may involve any kind of a contract made by salesmen, ordinary employes, regional managers, purchasing agents, corporation officials, etc. If there is no legal representation then there is no valid or enforceable contract.

Legal representation may arise under circumstances where the employer actually authorized an employe to act as his legal agent. In other instances the courts uphold the validity of contracts made by employes who have no actual authority but past conduct of the employer indicates that the employe impliedly was authorized to represent him.

Another important point of law is that although an unauthorized employe makes a contract, the employer may ratify and make it a valid agreement. Also, if the contract is one of sale and the seller ships the merchandise, which the buyer accepts, there is a valid contract.

For example, in A—— Co. v. P—— S—— Co., 176 Pac. (2d) 962, the testimony showed that a seller's agent made a written contract with a purchaser to sell the latter a certain quantity of merchandise. This contract contained a clause to the effect that all orders submitted by the seller's agent must be subject to the approval of the general sales manager of the selling corporation.

Without such approval the selling corporation shipped the merchandise and the purchaser accepted delivery and paid the agreed contract price. Later the purchaser filed suit for damages alleging that some of the merchandise was either defective or damaged.

The seller argued that the contract was void because it had been executed by a common employe and it had not been approved by the general sales manager. In refusing to hold the contract void, the higher court said:

"This proposition is untenable for the reason that all the material specified in the contract was shipped by defendant (seller) to, accepted and paid for by plaintiffs (purchaser) at the price and on the terms specified in the contract; thus defendant (seller) had fully ratified the contract by performance entered by its agent."

In other words, although the original contract contained a clause to the effect that to be binding it must be approved by the general sales manager, yet in disregard of this clause the seller had shipped the merchandise to the purchaser who accepted it, whereby both the buyer and seller ratified the otherwise unenforceable contract.

In the eyes of the law, what is the difference between special and general agents?

Ordinarily a "general" agent is one authorized to make valid contracts, guarantees, and promises within the scope of the department that he manages. A "special" agent, as a salesman, has no broad authority. An employer is liable for all acts, within the scope of the business, of a "general" agent. However, under the same circumstances he is not responsible for the acts of a "special" agent.

Legally, a "general" agent is an employe as a Sales Manager, who has general authority to act for his employer in the conduction of a business or department of the business. A "special" agent is one who is authorized to act for his employer in a special capacity, as doing only a single act or several specific acts. Bookkeepers, stenographers, salesmen, and the like are special agents.

In P—— v. K—— Co., 23 S. E. (2d) 471, it was shown that a sales manager made a contract for his employer. In later litigation the manager testified that he had no authority from his employer to sign the contract. However, he admitted that he was the sales manager of this department. Therefore, the higher court held the corporation liable on the contract.

Another important legal rule directly related to agents is, as follows: Although an agent is a "special" agent, and his employer is not ordinarily responsible for his contracts, statements and guarantees, the employer is responsible if the testimony proves:

1. That the conduct, acts, language, or silence on the part of the agent amounted to a representation or a concealment of material facts from the purchaser;
2. That these facts were not known to the purchaser at the time the transaction was completed;
3. That the truth concerning these facts was unknown to the purchaser at the time when it was acted upon by him;
4. That the acts of the agent were done with the intention, or at least with the expectation, that the purchaser would have been influenced;
5. That the conduct or promises of the agent were relied upon by the purchaser and, thus relying, he was caused to make the agreement.

On the other hand, it is well established that although any agent or employe practices deceit upon a purchaser, the latter has no legal recourse if the evidence indicates that he did not believe or rely upon the deceitful or fraudulent statements made by the agent. Still another important point of the law is that a deceitful or misleading statement made after the sale contract is signed does not give the purchaser any legal rights of recovery against the agent's employer.

For Additional Information on Distribution Legal Problems, See Letters to the Editor

Warehouse SPOTLIGHT

Warehousing Sales Groups To Meet in Chicago

With the AWA's Annual Convention scheduled for April 12-16 in Chicago, most of the industry's major sales groups, following a long standing tradition, have scheduled their annual meetings to coincide with the AWA sessions.

Following is a list of the organizations and their meeting dates and places:

Affiliated Warehouse Companies will hold its 2nd Annual Meeting at 2 pm, April 12, in the Balmoral Room of the Edgewater Beach Hotel.

On the same day, **Allied Distribution, Inc.**, will conduct its 22nd Annual Meeting from 10 am to 5 pm in the West Lounge of the Edgewater Beach.

In the same hotel and on the same day, **American Chain of Warehouses, Inc.**, has scheduled its 44th Annual Meeting, with business sessions to be conducted in the South Terrace Room, from 9 am to 5 pm.

Associated Warehouses, Inc., has set aside April 11 and 12 for its 21st Annual Meeting, also at the Edgewater Beach. Associated's Annual Dinner Party is scheduled for Thursday evening, April 14.

Distribution Service, Inc., will call its meeting to order at 2:30 pm, in the Sheridan Room of the Edgewater Beach Hotel.

Interlake Terminals, Inc. also has scheduled its Annual Meeting for April 12, at the Edgewater Beach Hotel.

—DA—

Warehouse Expansion

General Warehouse & Transportation Co., Chicago, Ill., recently announced the acquisition of the **Bartlett Storage Warehouse**, Rockford, Ill.

The D. H. Overmyer Warehouse Co., Toledo, O., now offers contract warehousing, on a national level, to manufacturers for storage of inventory in any city, without capital investment.

Transfer & Storage Co., Ltd., Sydney, Nova Scotia, recently announced the completion of a new furniture warehouse.

Near Record Attendance Expected at AWA Convention

A near record attendance is expected for the AWA's 64th Annual Meeting, to be held at the Edgewater Beach Hotel, Chicago, April 12-16.

The NARW and the AWA Merchandise Div. will meet jointly, and individual business sessions as well as two All-Industry sessions will be included in the program. NARW reports that its exhibit space is filled.

Featured speakers at the meetings will include Clem D. Johnston, past general president of AWA, and president of the U. S. Chamber of Commerce. Chairman M. W. Young, NARW president, and Chairman R. M. King, AWA Merchandise Div. president, will preside at the various meetings.

Installation of NARW and Merchandise Div. officers will take place at the closing sessions on Saturday morning. Following the divisional sessions will be the AWA closing session, with installation of general officers.

—DA—

The year 1955 marks the golden anniversary of the Stevens Van Lines, Saginaw, Mich.

New members of the AWA, Merchandise Div. are: Blytheville Warehouse Co., Blytheville, Ark.; Illiana Transit Warehouse Corp., Hammond, Ind.; Rocky Ford Moving Vans, Odessa, Tex.; Seaboard Warehouse Terminals, Inc., Miami, Fla.

—DA—

Men in the Spotlight

W. Walter Neeley—appointed general manager, Central Storage Co., Clarksburg, W. Va.

Ernest L. Dalany—new president, Columbia Van Lines, Inc., Hawthorne, Calif., succeeding **Harold W. Squier**—named chairman of the board.

Duncan Wallace — named general manager, Montreal Refrigerating & Storage, Ltd., Canada.

R. M. B. Crawford—appointed general manager, Campbell & Griffin, Ltd., Calgary, Canada.

George G. McClintock, Jr. — appointed assistant general manager, Motor Freight Express, Inc., York, Pa. **James A. Hill**—named district manager, Harrisburg, Pa.

R. D. Schafer — appointed traffic manager, North American Van Lines, Inc., Fort Wayne, Ind.

—DA—

Greyvan Lines, Inc., and Bekins Van Lines Co., recently announced renewal of an agency agreement combining their extensive facilities in the moving and storage field.

(*Please Turn to Page* 84)

For Additional Warehouse News, See Chuting the News, Washington DA and Within the Law

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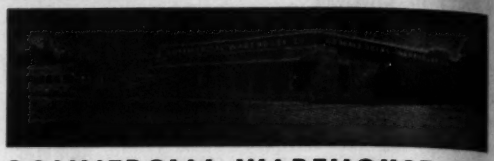

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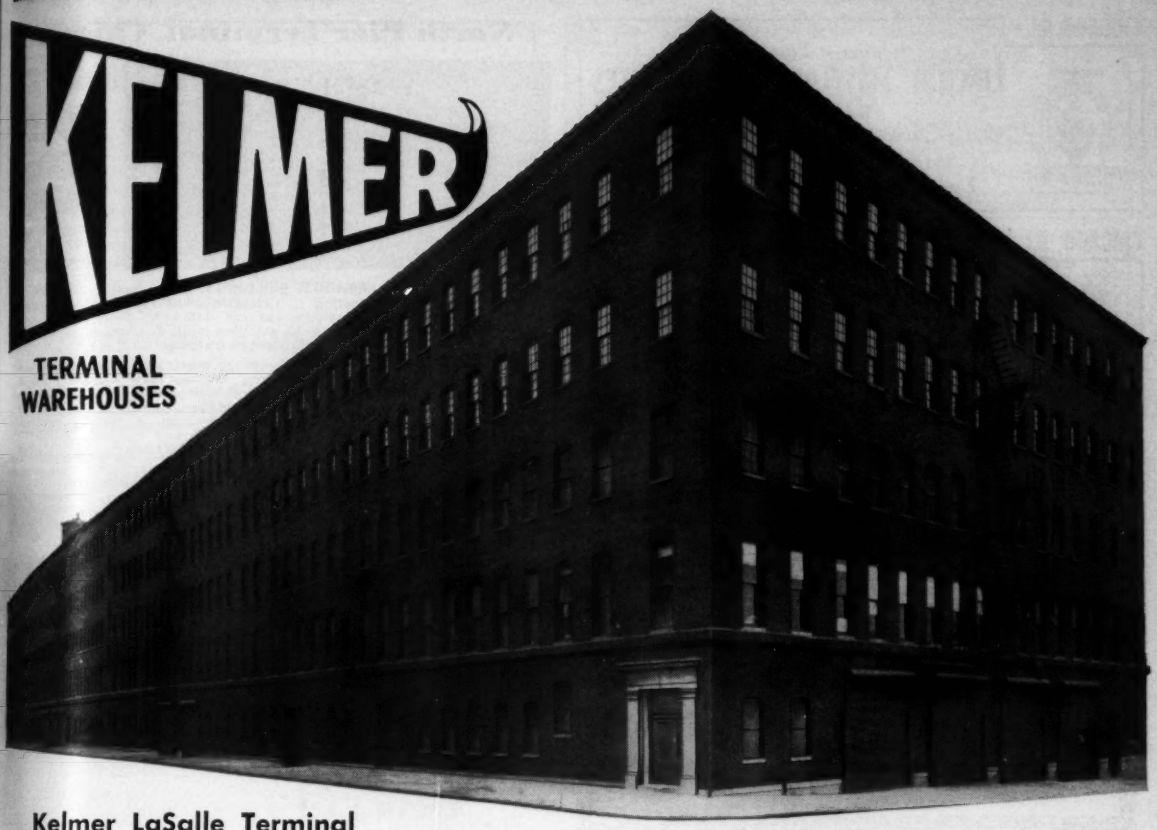

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North Pier Terminal Co.

Executive offices: 444 Lake Shore Drive, Chicago 11 — SUperior 7-5600

Warehouse Spotlight . . .

(Continued from Page 77)

Food Brokers Elect Graves

More than 2,200 members of the National Food Brokers Assn., meeting in Chicago last month, elected Truman F. Graves, of Seattle, Wash., as national chairman.

New members of the Canadian Warehousemen's Association (CWA) are: Wallace's Cartage & Storage, Toronto, Ontario, and Ontario Food Terminal Board, Toronto, Ontario.

Mayflower Group Holds 23rd Annual Meeting

The Mayflower Warehousemen's Assn. recently held its 23rd annual convention in St. Louis, Mo., with more than 450 delegates attending the four-day session. Newly elected officers of the group shown above are (l to r): R. R. Brown, president; Art Kriegsman, secretary-treasurer; director Lee Sloan, St. Louis host, and Frank Finnegan, retiring president and new board chairman

UVL Names Officers

United Van Lines, Inc., recently named the following officers for the year: John K. Gund, president of Lakewood Storage, Inc., Cleveland, O., re-elected president; W. W. Warren, Warren Transfer & Storage Co., Oklahoma City, Okla., renamed chairman of the board; Alfred J. Hicks, South Side Moving & Storage Co., Kansas City, Mo., first vice-president; William A. Strauss, Brooks Transfer & Storage Co., Richmond, Va., secretary, and William S. Kutschbach, Atlas Transfer & Storage Co., Columbus, O., treasurer.

A preview of the company's plans for an expanded operational and promotional program also was presented at the meetings.

—DA—

The Davidson Transfer and Storage Co., for the second time in four years, recently won first place in the annual truck fleet safety contest of the National Safety Council.

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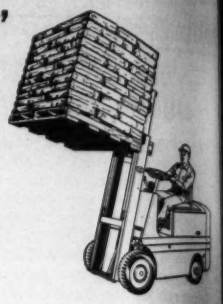

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Black Light Spotlights . . .

(Continued from Page 45)

with invisible, fluorescent inks and dyes, so that manufacturers may trace the source of products placed on a distant market, at less than fair-trade prices.

Recently, an appliance maker was able to locate a large quantity of vacuum cleaners "dumped" on another market by one of his distributors. Prior to shipment, the manufacturer had stamped each unit with invisible, fluorescent ink. Black light inspection of the machines revealed the hidden code.

High-pressure leaks, faulty weld seams and numerous plant troubles can be detected through the use of black light. The inspection engineer of a warehouse checked newly-installed utility piping by adding a water-soluble, safe-for-human-consumption powder to its roof-top water tower. Maintenance men, equipped with ultra violet lamps, inspected the new piping, paying particular attention to joints and valves. Several leaks were discovered.

Pilferage Uncovered

Pilfering from a warehouse was uncovered when a black-light inspection of a suspect's home revealed invisible ink markings on canned goods.

At another plant, fluorescing powder was put in a gasoline storage tank. The carburetors of a dozen employee-owned cars, upon black light inspection, produced a red glow.

Black light's uses in warehousing include checking janitorial efficiency —especially where foodstuffs are handled in bulk. Black light is useful for inspecting plumbing fixtures in lavatories. Human urine fluoresces blue or yellow white. Towels also can be scrutinized under black light to determine whether they have been used.

Color Correlation

However, black light, or any trouble-shooting medium is not perfect. Training and color recognition-correlation are required, in using black light.. Several materials may respond similarly to these rays and may appear, at first glance, the same color.

Sulfide wastes appear blue white under black light. Lubricating oils and greases tend to be green or blue white. Bleached fibers in sacking also fluoresce bluish white. Pitches and tars fluoresce yellow. Optical bleaches, detergents and soaps will make white cloth fluoresce blue white. Yet, rodent contamination may be detected on such a cloth under black light because of urine's weaker fluorescence against the cloth's bright blue white. Of course, positive identification comes through use of blue test paper.

Ultra violet light consists of wave lengths of light extending below the visible region of the spectrum. Ultra violet rays extend from 1,850 to about 4,000 angstrom units. More important, when a substance, material or object, capable of excitation by energy from another wave length is inspected under ultra violet, it assumes a characteristic color. This color, when properly correlated, is the key of detection through the use of black light.

Many types of ultra violet lamps are available. Lamps are usually simple in design. A bulb, equipped with a filter or of colored glass, holds back the bulb's visible light, allowing ultra violet to pass through. Usually, inspection is accomplished in a darkened room in order to see the fluorescing material.

As maintenance staffs become familiar with black light and its many uses, various materials can be isolated, and quickly identified, thus supporting black light's claim to being a trouble-shooting necessity in the field of warehousing. •

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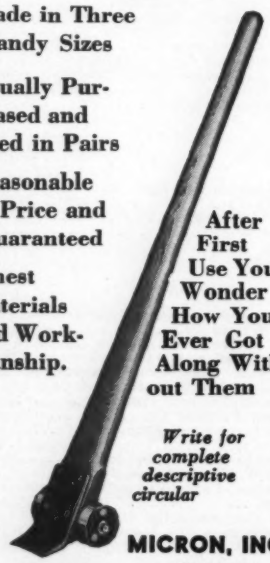

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